XR-C8220R

SERVICE MANUAL

AEP Model
UK Model

For RM-X4S (Remote Commander), please refer to RM-X4S Service Manual (9-925-698-□□) previously issued.

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Model Name Using Similar Mechanism	XR-C8100R
Tape Transport Mechanism Type	MG-25D-136

SPECIFICATIONS

Cassette player section

Tape track	4-track 2-channel stereo
Wow and flutter	0.08 % (WRMS)
Frequency response	30 – 20,000 Hz
Signal-to-noise ratio	

Cassette type	Dolby B NR	Dolby NR off
TYPE II, IV	67 dB	61 dB
TYPE I	64 dB	58 dB

Tuner section

FM

Tuning range	87.5 – 108.0 MHz
Aerial terminal	External aerial connector
Intermediate frequency	10.7 MHz
Usable sensitivity	8 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	65 dB (stereo), 68 dB (mono)
Harmonic distortion at 1 kHz	0.7 % (stereo), 0.4 % (mono)
Separation	35 dB at 1 kHz
Frequency response	30 – 15,000 Hz

MW

Tuning range	530 – 1,602 kHz
Aerial terminal	External aerial connector
Intermediate frequency	10.71 MHz/450 kHz
Sensitivity	30 µV

LW

Tuning range	153 – 281 kHz
Aerial terminal	External aerial connector
Intermediate frequency	10.71 MHz/450 kHz
Sensitivity	50 µV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	45 W × 4 (at 4 ohms)

General

Outputs	Line outputs (2) Power aerial relay control lead Power amplifier control lead Telephone ATT control lead Illumination control lead
Tone controls	Bass ±8 dB at 100 Hz Treble ±8 dB at 10 kHz
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 178 × 50 × 180 mm (w/h/d)
Mounting dimensions	Approx. 182 × 53 × 160 mm (w/h/d)
Mass	Approx. 1.5 kg
Supplied accessories	Rotary commander (1) Parts for installation and connections (1 set) Front panel case (1)

Design and specifications are subject to change without notice.

FM/MW/LW CASSETTE CAR STEREO

MICROFILM

SONY®

SECTION 1
SERVICE NOTE

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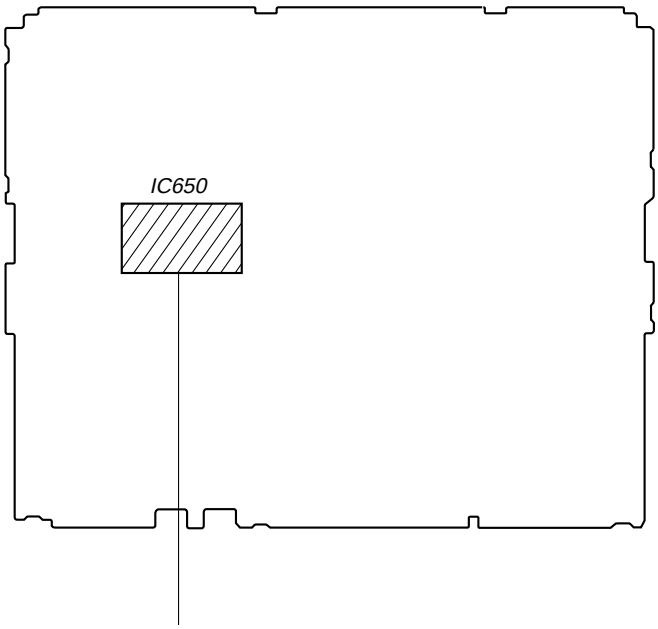
• Model Identification

The destination is expressed with the model according to the language of CSV (Computer Sound Voice) mounted in the set.
How to identify the model is described below.

– **MAIN BOARD** (Component Side) –



MSM6656A-687GS-KR1 (TYPE A: ENGLISH, FRENCH)
MSM6656A-688GS-KR1 (TYPE B: ENGLISH, GERMAN)
MSM6656A-689GS-KR1 (TYPE C: ENGLISH, SPANISH)
MSM6656A-690GS-KR1 (TYPE D: ENGLISH, ITALIAN)

Flexible Circuit Board Repairing

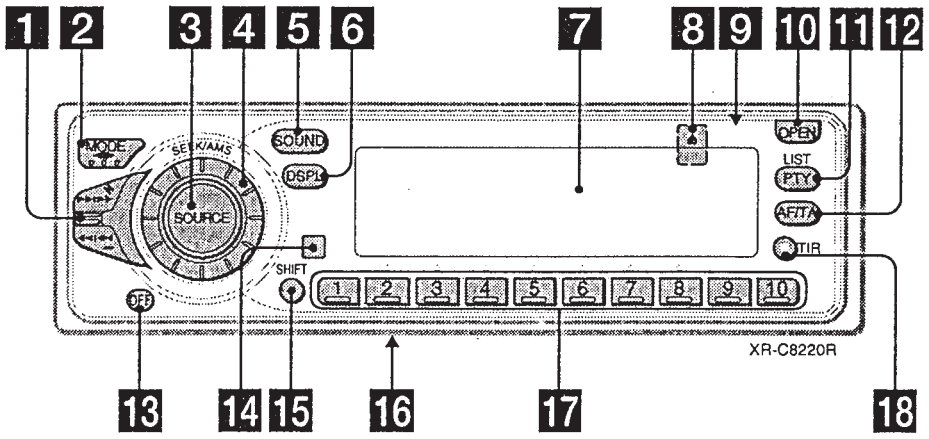
- Keep the temperature of the soldering iron around 270 ˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

This section is extracted from instruction manual.

Location of controls



Refer to the listed pages for details.

1 SEEK/AMS (seek/Automatic Music Sensor/manual search) control
9, 11, 13, 16, 17, 24, 25, 26, 29

2 MODE (◄I►)button
During tape reception:
Playback direction change 8, 9

During radio reception:
BAND select 10, 11

During CD or MD playback:
CD/MD Unit select 23, 25, 28

3 SOURCE (TAPE/TUNER/CD/MD) button
8, 10, 11, 14, 21, 23, 25, 28

4 Dial (volume/equalizer curve*/listening position*/subwoofer volume*/cut-off frequency*/bass/treble/left-right/rear-front control) 7, 15, 20, 27, 28

5 SOUND button 20

6 DSPL (display mode change) button
9, 11, 12, 23, 28, 29

7 Display window

8 ⏏ (eject) button (located on the front side of the unit behind the front panel) 8

9 Reset button (located on the front side of the unit behind the front panel) 6

10 OPEN button 6, 8, 32

11 PTY/LIST button
RDS Programme 17
Disc Memo 27, 28
List-up 29

12 AF/TA button 12, 13, 14, 15

13 OFF button 6, 8

14 Receptor for the optional wireless remote

15 SHIFT button
PLAY MODE 9, 10, 11, 13, 15, 25, 26, 27, 29, 30
REP 10, 24
SET UP 7, 18, 21, 22, 23
SHUF 24

16 POWER SELECT switch
(located on the bottom of the unit)
See "POWER SELECT switch" in the Installation/Connections manual.

17 During radio reception:
Number buttons 11, 13, 15, 16

During CD or MD playback:
Direct disc selection buttons
24, 25, 26, 29

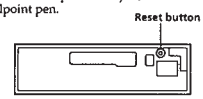
18 TIR button* 15, 16

4

Getting Started

Resetting the unit

Before operating the unit for the first time or after replacing the car battery, you must reset the unit.
Remove the front panel and press the reset button with a pointed object, such as a ballpoint pen.



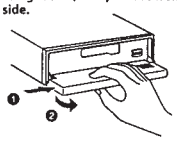
Note
Pressing the reset button will erase the clock setting and some memorized functions.

Detaching the front panel

You can detach the front panel of this unit to protect the unit from being stolen.

1 Press (OFF).

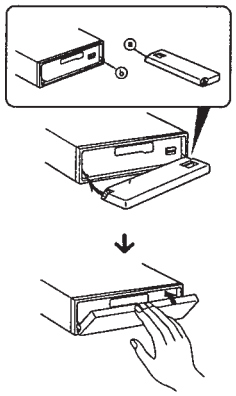
2 Press (OPEN), then slide the front panel to the right side, and pull out from the left side.



Notes
- *Be sure not to drop the panel when detaching it from the unit.*
- *If you detach the panel while the unit is still turned on, the power will turn off automatically to prevent the speakers from being damaged.*
- *When you carry the front panel with you, use the supplied front panel case.*

Attaching the front panel

Place the hole Ⓔ of the front panel onto the spindle Ⓑ on the unit as illustrated, then push the left side in.



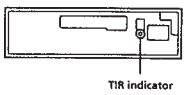
Notes
- *Be sure not to attach the front panel upside down.*
- *Do not press the front panel too hard against the unit when attaching it.*
- *Do not press too hard or put excessive pressure on the display window of the front panel.*
- *Do not expose the front panel to direct sunlight or heat sources such as hot air ducts, and do not leave it in a humid place. Never leave it on the dashboard of a car parked in direct sunlight or where there may be a considerable rise in temperature.*

Caution alarm

If you turn the ignition key switch to the OFF position without removing the front panel, the caution alarm will beep for a few seconds (only when the POWER SELECT switch on the bottom of the unit is set to the Ⓐ position).
If you connect an optional power amplifier and do not use the built-in amplifier, the beep sound will be deactivated.

TIR indicator

If you pull out the ignition key while the TIR function is on, the TIR indicator flashes a few times. (only when the POWER SELECT switch on the bottom of the unit is set to the Ⓐ position).



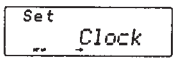
For more information on the TIR function, refer to "Recording the traffic announcements" (page 15).

Setting the clock

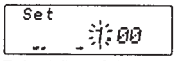
The clock uses a 24-hour digital indication.

Example: To set the clock to 10:08

1 Press (SHIFT), then press (3) (SET UP) repeatedly until "Clock" appears.

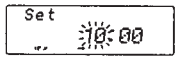


❶ Press (5) (→).

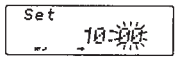


The hour indication flashes.

❷ Set the hour.

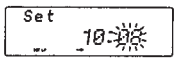


❸ Press (5) (→).



The minute indication flashes.

❹ Set the minute.



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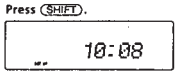
2 Press (SHIFT).



The clock starts.

3 Press (SHIFT).
After the clock setting is complete, the display returns to normal playback mode.

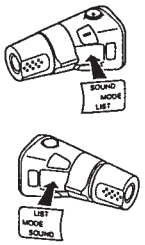
Note
If the POWER SELECT switch on the bottom of the unit is set to the Ⓐ position, turn the power on first, then set the clock.

Other Functions

You can also control an optional CD or MD unit, or equalizer preamplifier with the rotary commander.

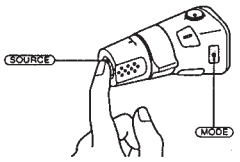
Labelling the rotary commander

Depending on how you mount the rotary commander, attach the appropriate label as shown in the illustration below.



Using the rotary commander

By pressing buttons (the SOURCE and MODE buttons)



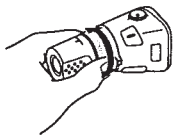
Each time you press (SOURCE), the source changes as follows:
TUNER → CD* → MD* → TAPE

Pressing (MODE) changes the operation in the following ways;
- Tape : transport direction
- Tuner : FM1 → FM2 → MW → LW
- CD unit* : CD1 → CD2 → ...
- MD unit* : MD1 → MD2 → ...

* *If the corresponding optional equipment is not connected, this item will not appear.*

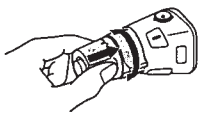
Tip
When the POWER SELECT switch is set to position Ⓑ, you can turn on this unit by pressing (SOURCE) on the rotary commander.

By rotating the control (the SEEK/AMS control)



Rotate the control and release it to:
- Locate the beginnings of the tracks on the tape. Rotate and hold the control momentarily, then release it to fast-wind the tape. To start playback while fast-winding the tape, press (MODE).
- Locate a specific track on a disc. Rotate and hold the control until you locate the specific point in a track, then release it to start playback.
- Tune in stations automatically. Rotate and hold the control to tune in a specific station.

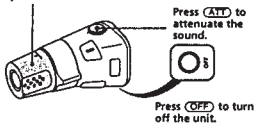
By pushing in and rotating the control (the PRESET/DISC control)



Push in and rotate the control to:
- Receive the stations memorized on the number buttons.
- Change the disc.

Other operations

Rotate the VOL control to adjust the volume.



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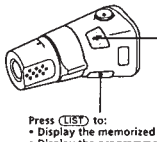
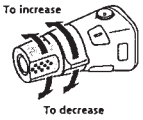
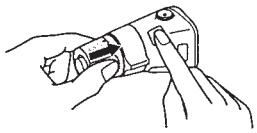


Changing the operative direction

The operative direction of controls is factory-set as shown below.



If you need to mount the rotary commander on the right hand side of the steering column, you can reverse the operative direction.



Press SOUND for two seconds while pushing the VOL control.

Tip
You can also change the operative direction of these controls with the unit (See "Changing the sound and display settings" on page 21).

Adjusting the sound characteristics

You can adjust the equalizer curve, listening position, cut-off frequency, bass, treble, balance, and fader.
You can store the bass and treble levels independently for each source.

1 Select the item you want to adjust by pressing SOUND repeatedly.

VOL (volume) → EQ (equalizer curve)*
→ POS (listening position)*
→ SUB (subwoofer volume)
→ CNW (Crossover Network)*
→ BAS (bass) → TRE (treble)
→ BAL (left-right) → FAD (front-rear)

** If the corresponding optional equipment is not connected, this item will not appear.*

2 Adjust the selected item by rotating the dial.
Adjust within three seconds after selecting the item. (After three seconds, the dial function reverts the volume control.)

Attenuating the sound

Press ATT on the supplied rotary commander or the optional wireless remote.
"ATT on" lights up for a second.

To restore the previous volume level, press ATT again.

Tip
The unit decreases the volume automatically when a telephone call comes in (Telephone ATT function).

Changing the sound and display settings

The following items can be set:
• Clock (page 7)
• CT (Clock Time) (page 18)
• D.Info (Dual Information)*1 – to display the clock and the play mode simultaneously (on), or to display the information alternately (off).
• Amber/Green – to change the illumination colour to amber or green.
• Dimmer – to change the brightness of the display.
— Select "Auto" to dim the display only when you turn the interior lights on.
— Select "on" to dim the display.
— Select "off" to deactivate Dimmer.
• Contrast – to adjust the contrast if the indications in the display are not recognizable because of the unit's installed position.
• Voice guide*1,3 function for vocalized comments.
— Select "Voice 1" to minimize the volume of the guide.
— Select "Voice 2" to choose a louder volume than "Voice 1."
— Select "Voice 3" to maximize the volume of the guide.
— Select "Voice off" to deactivate the Voice guide.
• Beep – to turn the beep sounds on or off.
• RM (Rotary Commander) – to change the operative direction of the controls of the rotary commander.
— Select "norm" to use the rotary commander in the factory-set position.
— Select "rev" when you mount the rotary commander on the right hand side of the steering column.
• L.out (Line Output)*2,3 (page 22)
• Loud (Loudness)*1 – to enjoy bass and treble even at low volumes. The bass and treble will be reinforced.
• LPF (Low Pass Filter)*1,3
• M.dspl (Motion Display) – to turn the motion display to 1, 2, or off.
• English/Spanish*1,3 – to change the vocalized comments of the Voice guide to English or Spanish.
• A. Scrl (Auto Scroll)*1 (page 23)

1 Press SHIFT.

2 Press 3 (SET UP) repeatedly until the desired item appears.
Each time you press 3 (SET UP), the item changes as follows:
Clock → CT → D.Info*1 → Amber/Green → Dimmer → Contrast → Voice*1,2 → Beep → RM → Lout*2,3 → Loud*1 → LPF*1,3 → M.dspl → English/Spanish*1,3 → A.Scrl*1

**1 When the radio is off, or when no tape, CD, or MD is playing, this item will not appear.*
**2 When the optional equalizer preamplifier is not connected, this item will not appear.*
**3 XR-C8220R only*

3 Press 5 (→) to select the desired setting (Example: on or off).
For the "Contrast" setting, pressing 5 (→) makes the contrast higher, and pressing 2 (←) makes the contrast lower.

4 Press SHIFT.
After the mode setting is complete, the display returns to normal playback mode.

Adjusting the frequency of the subwoofer(s)

To match the characteristics of the connected subwoofer(s), you can cut out the unwanted high and middle frequency signals entering the subwoofer(s). By setting the cut-off frequency, the subwoofer(s) will output only low frequency signals so you can get a clearer sound image.

1 Press SOURCE to select a source (radio, tape, CD, or MD).

2 Press SHIFT, then press 3 (SET UP) repeatedly until "LPF off" appears.

continue to next page →

3 Press 5 (→) or 2 (←) repeatedly to select desired setting.

Each time you press 5 (→) or 2 (←), the cut-off frequency in the display changes as follows:
LPF off ↔ LPF 80 Hz ↔ LPF 120 Hz

4 Press SHIFT.
When the frequency setting is complete, the display returns to the normal playback mode.

Adjusting the sound and frequency of the equalizer preamplifier

This unit can also control an optional equalizer preamplifier.
This lets you add some effects to the sound field of the currently selected source.

For details, refer to the instructions manual supplied with the equalizer preamplifier.

Note
If you connect the optional digital preamplifier XDP-210EQ, the voice guide function will not work.

Changing the line output level

You can change the line output level if you hear distortion or other noise.
When the optional equalizer preamplifier is connected, you can set this function.

1 Press SHIFT, then press 3 (SET UP) until "L.out" appears.

2 Press 5 (→) to select the desired setting "L.out Hi" or "L.out Lo."

3 Press SHIFT.

Installation

Precautions

- Do not tamper with the four holes on the upper surface of the unit. They are used for tuner adjustments to be made only by service technicians.
- If you mount other Sony equipment with this unit, it is better to mount this unit in the lower position.
- There must be a distance of at least 15 cm between the cassettes slot of the unit and shift lever to insert cassette easily. Choose the installation location carefully so the unit does not interfere with gear shifting and other driving operations.
- Choose the installation location carefully so that the unit will not interfere with normal driving operations.
- Avoid installing the unit in areas subject to dust, dirt, excessive vibration, or high temperatures, such as in direct sunlight or near heater ducts.
- Use only the supplied mounting hardware for a safe and secure installation.

Mounting angle adjustment

Adjust the mounting angle to less than 20°.

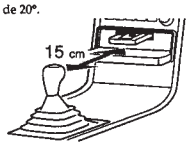
Instalación

Precauciones

- No toque los cuatro orificios de la superficie superior de la unidad. Estos orificios son para ajustes del sintonizador que solamente deberán realizar técnicos de reparación.
- Si monta otro equipo Sony con esta unidad, es preferible montar esta unidad en la posición más baja.
- Para que sea posible insertar la cinta con facilidad, debe haber una distancia de al menos 15 cm entre la ranura de inserción de cintas de la unidad y la palanca de cambios.
  Instale la unidad en un lugar que no entorpezca las operaciones de cambio de marchas o de conducción en general.
- Elija cuidadosamente el lugar de montaje de forma que la unidad no interfiera las funciones normales de conducción.
- Evite instalar la unidad donde pueda quedar sometida a altas temperaturas, como a la luz solar directa o al aire de calefacción, o a polvo, suciedad, o vibraciones excesivas.
- Para realizar una instalación segura y firme, utilice solamente la ferretería de montaje suministrada.

Ajuste del ángulo de montaje

Ajuste el ángulo de montaje a menos de 20°.



Montering

Säkerhetsföreskrifter

- Låt de fyra hålen på bilstereons ovansida vara. De är till för radiojusteringar som endast får utföras av fackkunniga tekniker.
- Om du monterar annan Sony-utrustning till denna enhet är det bäst att montera denna enhet i det undre läget.
- För att du ska kunna sätta i och ta ut bandet måste avståndet vara minst 15 cm mellan kassettfacket på enheten och växelspaken. När du installerar enheten väljer du en plats så att enheten inte är i vägen när du kör.
- Var noga när du väljer var i bilen du monterar bilstereon, så att den inte sitter i vägen när du kör.
- Montera inte bilstereon där den utsätts för värme, t ex solsken eller varmluft, eller där den utsätts för damm, smuts och/eller vibrationer.
- Använd endast de medföljande monteringstillbehören för att vara säker på att bilstereon monteras på ett säkert och korrekt sätt.

Tillåten monteringsvinkel

Monteringsvinkeln får inte vara större än 20 grader.

Instalação

Precauções

- Não altere indevidamente os quatro orifícios da superfície da parte superior do aparelho. Estes servem para regulações do sintonizador que devem ser efectuadas somente por técnicos qualificados.
- É preferível montar este aparelho na posição mais baixa, se quiser montar simultaneamente outros equipamentos da Sony.
- Para colocar com facilidade a cassete, deve haver uma distância de pelo menos 15 cm entre a ranhura de introdução da cassete e a alavanca das mudanças.
  Escolha o local de instalação de forma a que o aparelho não interfira com as mudanças de velocidade ou com as outras manobras de condução.
- Escolha com cuidado um local apropriado para a montagem do aparelho, para que este não interfira com as manobras necessárias à condução do veículo.
- Evite instalar o aparelho onde possa estar sujeito a altas temperaturas, como em locais expostos directamente à luz do sol, ao ar quente dos aquecimentos, ou sujeitos a pó, sujidade ou vibração excessiva.
- Para efectuar uma instalação segura utilize unicamente o hardware de montagem fornecido.

Ajuste do ângulo de montagem

Ajuste o ângulo de montagem a menos de 20°.

How to detach and attach the front panel

Before installing the unit, detach the front panel.

A To detach

Before detaching the front panel, be sure to press (OFF). Press (OPEN), then slide the front panel to the right side, and pull out the left side.

B To attach

Place the hole ⓐ in the front panel onto the spindle ⓑ on the unit as illustrated, then push the left side in.

Forma de extraer e instalar el panel frontal

Antes de instalar la unidad, extraiga el panel frontal.

A Para extraerlo

Antes de extraer el panel frontal, cerciórese de pulsar (OFF). Después pulse (OPEN) a fin de abrirlo, después deslícelo hacia la derecha, y por último tire de su parte izquierda.

B Para instalarlo

Coloque el orificio ⓐ del panel frontal en el eje ⓑ de la unidad, como se muestra en la ilustración, y después presione la parte izquierda.

Ta loss/fästa frontpanelen

Ta loss frontpanelen innan du monterar bilstereon.

A Ta loss frontpanelen

Var noga med att trycka på (OFF) innan frontpanelen tas loss. Tryck därefter på (OPEN) för att öppna frontpanelen. Skjut frontpanelen åt höger och dra dess vänstra del utåt för att ta loss frontpanelen.

B Fästa frontpanelen

Placera frontpanelen så att hålet ⓐ på frontpanelen träs över axeln ⓑ på bilstereon enligt illustrationen. Tryck därefter frontpanelens vänstra del inåt.

Para retirar e colocar o painel frontal

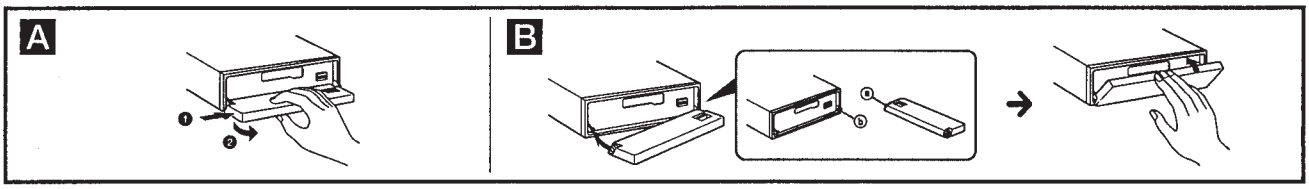
Retire o painel frontal antes de iniciar a instalação do aparelho.

A Para retirar

Antes de retirar o painel frontal, tem de carregar primeiro em (OFF). A seguir, carregue em (OPEN) para soltar o painel frontal e empurre-o para a direita. Depois puxe o lado esquerdo do painel para fora.

B Para colocar

Coloque o orifício ⓐ do painel frontal no eixo ⓑ do aparelho tal como ilustrado, e depois carregue no lado esquerdo para dentro.

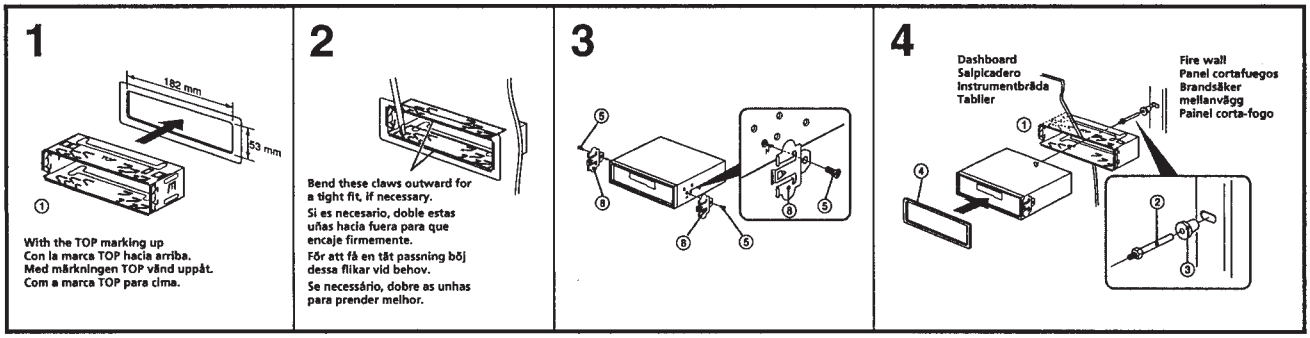


Installation in the dashboard

Instalación en el salpicadero

Montera på instrumentbrädan

Instalação no tablier



Connections

Cautions

- This unit is designed for negative earth 12 V DC operation only.
- Be careful not to pinch any wires between a screw and the body of the car or this unit or between any moving parts such as the seat railing, etc.
- Connect the power connecting cord Ⓑ to the unit and speakers before connecting it to the auxiliary power connector.
- **Run all earth wires to a common earth point.**
- Connect the yellow cord to a free car circuit rated higher than the unit's fuse rating. If you connect this unit in combination with other stereo components, the car circuit they are connected to must be rated higher than the sum of the individual components' fuse rating. If there are no car circuits rated as high as the unit's fuse rating, connect the unit directly to the battery. If no car circuits are available for connecting this unit, connect the unit to a car circuit rated higher than the unit's fuse rating in such a way that if the unit blows its fuse, no other circuits will be cut off.

If your car has no accessory position on the ignition key switch — POWER SELECT switch

The front panel illumination is factory set to be turned on even while the unit is not in use. However, this setting may cause some car battery wear if **your car has no accessory position on the ignition key switch.** To avoid this battery wear, **set the POWER SELECT switch located on the bottom of the unit to the Ⓑ position, then press the reset button.** The illumination is reset to stay off while the unit is not in use.

Notes

- *The caution alarm for the front panel and TIR indicator is not activated when the POWER SELECT switch is set to the Ⓑ position.*
- *Do not use excessive force when changing the POWER SELECT switch.*

Inverter

Cautions

- *Install the inverter far away from the unit using double-side adhesive tape or something similar.*
- *Be sure not to mount the inverter under a mat or in a place exposed to splashing water of air conditioner. It may cause electric shock or damage to the unit.*

Note

If the inverter's cord is pinched, the display indications may not appear.

Notes of connection example

Notes on the control leads

- *The power aerial control lead (blue) supplies +12 V DC when you turn on the tuner or when you activate the ATA (Automatic Tuner Activation), AF (Alternative Frequency), the TA (Traffic Announcement) or TIR (Traffic Information Replay) function.*
- *A power aerial without a relay box cannot be used with this unit.*

Warning

If you have a power aerial without a relay box, connecting this unit with the supplied power connecting cord Ⓑ may damage the aerial.

Memory hold connection

When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition switch is turned off.

Notes on speaker connection

- *Before connecting the speakers, turn the unit off.*
- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities. Otherwise, the speakers may be damaged.*
- *Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.*
- *Do not attempt to connect the speakers in parallel.*
- *Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers. Therefore, be sure to connect passive speakers to these terminals.*

Conexiones

Precauciones

- Esta unidad ha sido diseñada para alimentarse con 12 V CC, negativo a masa, solamente.
- Tenga cuidado de no atrapar ningún cable entre algún tornillo y la carrocería del automóvil o esta unidad o entre las partes móviles, como por ejemplo los rafles del asiento, etc.
- Conecte el cable de conexión de alimentación Ⓑ a la unidad y los altavoces antes de conectarlo al conector de alimentación auxiliar.
- **Conecte todos los conductores de puesta a masa a un punto común.**
- Conecte el cable amarillo a un circuito libre del automóvil de potencia nominal superior a la del fusible de la unidad. Si conecta esta unidad en combinación con otros componentes estéreo, la potencia nominal del circuito del automóvil a los que dichos componentes estén conectados debe ser superior a la suma de la potencia nominal del fusible de los componentes. Si no existen circuitos de automóvil de potencia nominal tan alta como la del fusible de la unidad, conecte ésta directamente a la batería. Si no hay circuitos de automóvil disponibles para conectar esta unidad, conecte la misma a un circuito de automóvil de potencia nominal superior a la del fusible de la unidad de forma que no se desactiven otros circuitos si el fusible de dicha unidad se funde.

Si el automóvil no dispone de posición para accesorios en la llave de encendido

— Selector POWER SELECT

La iluminación del panel frontal ha sido ajustada en fábrica para que esté activada aunque la unidad no se encuentre en funcionamiento. Sin embargo, este ajuste puede provocar cierta descarga de la batería del automóvil **si éste no dispone de posición para accesorios en la llave de encendido.** Para evitar esto, **ponga el selector POWER SELECT, situado en la base de la unidad, en la posición Ⓑ y, después, pulse el botón de restauración.** La iluminación estará desactivada cuando la unidad no se encuentre en funcionamiento.

Notas

- *La alarma de precaución para el indicador TIR y el panel frontal no se activará si el selector POWER SELECT está ajustado en la posición Ⓑ.*
- *No emplee excesiva fuerza al cambiar el selector POWER SELECT.*

Inversor

Precauciones

- *Instale el inversor alejado de la unidad utilizando cinta adhesiva de dos caras o algo similar.*
- *Cerciórese de no montar el inversor debajo de una alfombrilla ni en un lugar expuesto a salpicaduras de agua de un acondicionador de aire. Esto puede provocar descargas eléctricas o daños a la unidad.*

Nota

Si el cable del inversor quedase pillado, es posible que no aparecieses las indicaciones del visor.

Notas de ejemplo de conexiones

Notas sobre conductores de control

- *El conductor de control (azul) de la antena motorizada suministra + 12 V CC al activar el sintonizador o la función ATA (activación automática del sintonizador), AF (frecuencias alternativas), TA (anuncios de tráfico) o TIR (repetición de información sobre el tráfico).*
- *Con esta unidad no podrá utilizarse una antena motorizada sin caja de relés.*

Advertencia

Si dispone de una antena motorizada sin dispositivo de relé, la conexión de esta unidad con el cable de conexión de alimentación Ⓑ suministrado puede dañar la antena.

Conexión para protección de la memoria

Si conecta el conductor de entrada amarillo, el circuito de la memoria recibirá siempre alimentación, incluso aunque ponga la llave de encendido en la posición de apagado.

Notas sobre la conexión de los altavoces

- *Antes de conectar los altavoces, desconecte la alimentación de la unidad.*
- *Utilice altavoces con una impedancia de 4 a 8 ohmios, y con la potencia máxima admisible adecuada, ya que de lo contrario podría dañarlos.*
- *No conecte los terminales del sistema de altavoces al chasis del automóvil, ni los del altavoz izquierdo a los del derecho.*
- *No intente conectar los altavoces en paralelo.*
- *No conecte altavoces activos (con amplificadores incorporados) a los terminales de altavoces de la unidad. Si lo hiciese, podría dañar tales altavoces. Por lo tanto, cerciórese de conectar altavoces pasivos a estos terminales.*

Anslutning

Säkerhetsföreskrifter

- Denna bilstereo är endast avsedd för anslutning till ett negativt jordat, 12 V DC bilbatteri.
- Var noga med att inga kablar kläms mellan någon skruv eller att de blir klämda mellan rörliga delar som t.ex. bilsätet.
- Anslut strömkabeln Ⓑ till enheten och högtalarna innan du ansluter den till den yttre strömanslutningen.
- **Dra samtliga jordledningar till en och samma jordningspunkt.**
- Anslut den gula kabeln till en ledig bilkrets med ett högre amperetal än enhetens. Om du seriekopplar enheten till andra stereokomponenter måste den bilkrets de kopplas till ha en högre ampere än summan av de enskilda delarnas amperestyrka. Om det inte finns några bilkretsar med en så hög amperestyrka som enhetens ska du ansluta enheten direkt till batteriet. Om inga bilkretsar finns för anslutning till enheten ska du ansluta enheten till en bilkrets med en högre ampere än enhetens styrka så att inga kretsar slås ut om enhetens säkring smälter.

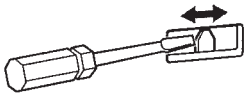
Om bilstereon monteras i en bil vars tändlås inte har något strömläge

— Omkopplaren POWER SELECT

Innan bilstereon levereras från fabriken ställdes belysningen i teckenfönstret in så att den lyser också när bilstereon inte används. Detta kan emellertid orsaka urladdning av batteriet när du använder bilstereon **i en bil, vars tändlås saknar läget ACC (strömläge). Skjut omkopplaren POWER SELECT på bilstereons undersida till läge Ⓑ, och tryck sedan på återställningsknappen** för att undvika att bilbatteriet laddas ur. Nu lyser inte längre belysningen i teckenfönstret när bilstereon inte används.

Observera

- *Varningssignalen till frontpanelens TIR-indikator ljuder inte när omkopplaren POWER SELECT står i läge Ⓑ.*
- *Ta inte i för mycket när du ställer om POWER SELECT-omkopplaren.*



Växelriktare

Säkerhetsföreskrifter

- *Installera växelriktaren långt bort från enheten med dubbelhäftad tejp eller liknande.*
- *Montera inte växelriktaren under en matta eller en plats där det är risk för vattenstänk från luftkonditionering. Det kan leda till att enheten skadas eller utsätts för elektriska stötar.*

Observera

Om växelriktarens kabel är hopklämd, visas inga indikationer i teckenfönstret.

Att observera angående anslutningsexemplen

Att observera angående olika styrkablarna

- *Motorantennens styrkabel (blå) leder + 12 V DC likström när kanalväljaren slås på eller när radiomottagningsautomatik ATA, mottagning av alternativa frekvenser AF, mottagning av trafikmeddelanden TA eller uppspelning av trafikinformation TIR kopplas in.*
- *En motorantenn utan styrreläd osa kan inte anslutas till denna bilstereo.*

Varning

Om du har en motorantenn utan reläd osa kan antennen skadas om du ansluter enheten med den medföljande strömkabeln Ⓑ.

Anslutning för minnesstöd

När du anslutit den gula, ingående strömkabeln försörjs minneskretsen med ström hela tiden, även när tändlåset slås ifrån.

Att observera angående högtalarnas anslutning

- *Slå av bilstereon innan du ansluter högtalarna.*
- *Anslut endast högtalare, vars impedans varierar från 4 till 8 ohm och som har tillräcklig effekthanteringskapacitet för att skydda högtalarna mot skador.*
- *Anslut inte något av högtalaruttagen till bilens chassi. Anslut inte heller uttagen på höger högtalare till uttagen på vänster högtalare.*
- *Anslut inte högtalarna parallellt.*
- *Anslut inte aktiva högtalare (med inbyggda slutsteg) till bilstereons högtalaruttag, eftersom de kan skada de aktiva högtalarna. Var noga med att bara ansluta passiva högtalare till dessa uttag.*

Ligações

Advertência

- Este aparelho foi concebido para funcionar somente com corrente contínua de 12 V com negativo à massa.
- Tenha cuidado para que os fios não fiquem entalados entre os parafusos e a carroçaria do automóvel ou a caixa do aparelho nem entre as peças móveis, por exemplo, as calhas dos bancos, etc.
- Ligue o cabo de alimentação de corrente Ⓑ ao aparelho e aos alifalantes antes de o ligar ao conector de corrente auxiliar.
- **Ligue todos os fios de terra num ponto de massa comum.**
- Ligue o cabo amarelo a um circuito eléctrico livre do automóvel, cuja potência nominal seja superior à dos fusíveis do aparelho. Se ligar este aparelho em série com outros componentes estéreo, a potência nominal do circuito eléctrico do automóvel onde os ligar tem de ser superior à soma potência nominal dos fusíveis de todos os componentes individuais. Se não houver nenhum circuito eléctrico do automóvel com uma potência nominal tão elevada como a dos fusíveis do aparelho, ligue-o directamente à bateria. Se não estiver disponível nenhum circuito eléctrico do automóvel para ligação deste aparelho, ligue-o a um circuito eléctrico do automóvel com uma potência nominal superior à dos fusíveis do aparelho, de tal modo que, se o aparelho rebentar os fusíveis respectivos, nenhum outro circuito seja cortado.

Se o seu automóvel não estiver equipado com uma chave de ignição com posição acessórios

— Interruptor POWER SELECT

A iluminação do painel frontal é regulada na fábrica para se manter acesa, mesmo quando o aparelho não estiver ligado. No entanto, esta regulação pode provocar a descarga da bateria **se o aparelho for utilizado em automóveis sem chave de ignição com posição acessórios.** Para evitar a descarga da bateria, **regule o interruptor POWER SELECT, situado na base do aparelho, para a posição Ⓑ. Em seguida, carregue no botão de reinicialização.** A iluminação é regulada para ficar apagada enquanto o aparelho estiver desligado.

Notas

- *O alarme de aviso do painel frontal e o indicador TIR não são activados se o selector POWER SELECT estiver colocado na posição Ⓑ.*
- *Não faça demasiada força quando mudar a posição do selector POWER SELECT.*

Inversor

Advertência

- *Instale o inversor longe do aparelho utilizando fita autocolante com duas faces ou qualquer outro material semelhante.*
- *Não monte o inversor debaixo de tapetes ou num local exposto a salpicos de água do ar condicionado, pois se o fizer, pode provocar choques eléctricos ou danificar o aparelho.*

Nota

Se o cabo do inversor estiver preso, as indicações do visor podem não aparecer.

Notas sobre o exemplo de ligação

Notas sobre os fios de controlo

- *O fio de controlo da antena eléctrica (azul) fornece +12 V CC quando ligar o sintonizador ou quando activar as funções ATA (Activação automática do sintonizador), AF (frequência alternativa), TA (Informações de trânsito) ou TIR (Repetição da informações de trânsito).*
- *Uma antena eléctrica sem um relé não pode ser utilizada com este aparelho.*

Atenção

Se a antena eléctrica não tiver uma caixa de relé, o facto de ligar este aparelho com a cabo de alimentação Ⓑ fornecido, pode provocar danos na antena.

Ligação para alimentação contínua da memória

Quando, o fio amarelo de entrada de alimentação for ligado, os circuitos de memória ficarão com alimentação contínua, mesmo se a chave de ignição estiver desligada.

Notas sobre a ligação dos altifalantes

- *Antes de ligar os altifalantes, desligue o aparelho.*
- *Utilize altifalantes com impedância de 4 a 8 ohm, e com capacidade de potência admissível adequada. Caso contrário, os altifalantes poderão sofrer avarias.*
- *Não ligue os terminais do sistema de altifalantes ao chassis do automóvel, e não ligue os terminais do altifalante direito aos terminais do altifalante esquerdo.*
- *Não tente ligar os altifalantes em paralelo.*
- *Não ligue nenhum sistema de altifalantes activos (com amplificadores incorporados) aos terminais dos altifalantes do aparelho. Caso o faça, poderá avariar o sistema de altifalantes activos. Portanto, não se esqueça de ligar altifalantes passivos a estes terminais.*

After connecting

After connecting, bundle up the connecting cord of the rotary commander with other connecting cords of the audio equipment by attaching the supplied cramper ⑬. Be sure to leave some slack in the connecting cord between the plug and the cramper as illustrated.

Después de realizar la conexión

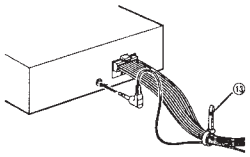
Una vez realizada la conexión, recoja el cable de conexión del mando con el resto de los cables de conexión del equipo de audio mediante el fijador de cables ⑬. Como muestra la ilustración, procure dejar un espacio en el cable de conexión entre el enchufe y el fijador de cables.

Efter anslutningen

När du är klar fäster du ihop sladden till vridkontrollen och andra sladdar till ljudutrustningen med medföljande krampa ⑬. Se till så att sladdarna mellan kontakten och fästanordningen inte blir för hårt spända, se bilden.

Depois de efectuar a ligação

Depois de ter efectuado a ligação, ate o cabo de ligação do comando aos outros cabos de ligação do equipamento áudio mediante a utilização da braçadeira ⑬ fornecida. Deixe alguma folga no cabo de ligação entre a ficha e a braçadeira, conforme a ilustração.



Connection diagram

Equipment used in illustrations (not supplied)

- Front speaker — Altavoz delantero — Främre högtalare — Altifalante dianteiro
- Rear speaker — Altavoz trasero — Bakre högtalare — Altifalantes traseiro
- Active subwoofer — Altavoz potenciador de graves activo — Aktiv subwoofer — Subwoofer activo
- Power amplifier — Amplificador de potencia — Effektförstärkare — Amplificador de potência
- CD/MD changer — Cambiador de CD/MD — CD/MD-skivväxlare — Permutador CD/MD

For connecting two or more changers, the source selector XA-C30 (optional) is necessary.

Diagrama de conexiones

Equipo utilizado en las ilustraciones (no suministrado)

Si desea conectar dos o más cambiadores, necesitará el selector de fuente XA-C30 (opcional).

Kopplingsschema

Utrustning som visas i illustrationer (medföljer inte)

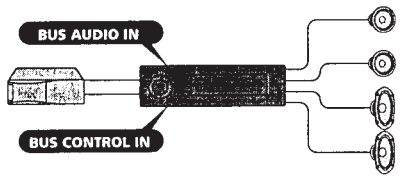
För anslutning av två eller fiera växlare krävs väljaren XA-C30 (tillval).

Diagrama de ligações

Equipamento utilizado nas ilustrações (não fornecido)

Para ligar um ou mais permutadores, é necessário o selector de fonte XA-C30 (opcional).

A



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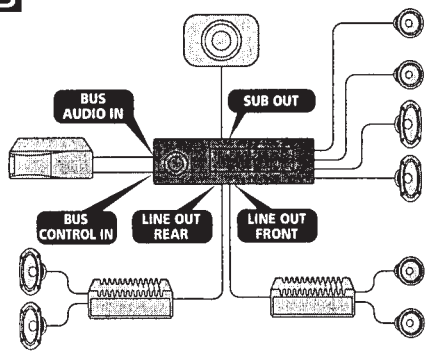


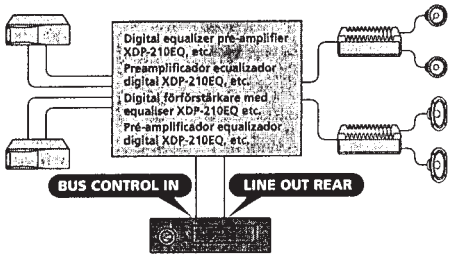
Notes
- *Be sure to connect the earth cord, before connecting the amplifier.*
- *If you connect an optional power amplifier and do not use the built-in amplifier, the beep sound will be deactivated.*

Notas
- *Asegúrese de conectar primero el cable de puesta a masa antes de realizar la conexión al amplificador.*
- *Si conecta un amplificador de potencia opcional y no utiliza el incorporado, los pitidos se desactivarán.*

Obsevera
- *Var noga med att först ansluta jorden, innan du ansluter förstärkaren.*
- *Om du väljer att använda en annan förstärkare i stället för den inbyggda, kommer ljudsignalen att avaktiveras.*

Notas
- *Antes de fazer a ligação ao amplificador tem de ligar primeiro o cabo de ligação à massa.*
- *Se ligar um amplificador de potência opcional e não utilizar o amplificador integrado, desactiva o sinal sonoro.*

C


Digital equalizer pre-amplifier XDP-210EQ, etc.
Preamplificador ecualizador digital XDP-210EQ, etc.
Digital förförstärkare med equaliser XDP-210EQ etc.
Pré-amplificador equalizador digital XDP-210EQ, etc.
BUS CONTROL IN
LINE OUT REAR

When connecting a digital equalizer pre-amplifier (XDP-210EQ, etc.)
- *Use an optional exterior amplifier. The built-in amplifier of this unit can not be used in this case. For details, refer to the Installation/Connections manual XDP-210EQ, etc.*
- *For details about the connection, refer to the Instllation/Connections manual XDP-210EQ, etc. (not supplied)*

Si conecta un preamplificador ecualizador digital (XDP-210EQ, etc.)
- *Utilice un amplificador opcional externo. El amplificador incorporado de esta unidad no puede utilizarse en este caso. Para más información, consulte el manual de Instalación/conexiones de la unidad XDP-210EQ, etc.*
- *Para obtener información detallada sobre la conexión, consulte el manual de instalación/conexiones de la unidad XDP-210EQ, etc. (no suministrada)*

När du ansluter en digital förförstärkare med equaliser (XDP-210EQ etc.)
- *Använd en valfri extern förstärkare. Den inbyggda förstärkaren kan inte användas i detta fall. Mer information finns i Montering/Anslutninghandboken XDP-210EQ etc.*
- *Mer information om hur du ansluter utrustning finns i Montering/Anslutninghandboken XDP-210EQ etc. (medföljer inte)*

Se ligar um pré-amplificador equalizador digital (XDP-210EQ, etc.)
- *Utilize um amplificador exterior opcional. O amplificador integrado neste aparelho não pode ser utilizado neste caso. Para obter mais informações, consulte o manual de Instalação/Ligações XDP-210EQ, etc.*
- *Para obter mais informações sobre a ligação, consulte o manual de Instalação/ Ligações do XDP-210EQ, etc. (não fornecido)*

Installing the rotary commander

Notes
- *Choose the mounting location carefully so that the rotary commander will not interfere with operating the car.*
- *Do not install the rotary commander in a place where it may jeopardize the safety of the (front) passenger in anyway.*
- *When installing the rotary commander, be sure not to damage the electrical cables, etc. on the other side of the mounting surface.*
- *Avoid installing the rotary commander where it may be subject to high temperatures, such as from direct sunlight or hot air from the heater, etc.*

Instalación del mando rotativo

Notas
- *Elija cuidadosamente el lugar de montaje de forma que el mando rotativo no dificulte la conducción del coche.*
- *No instale el mando rotativo en un lugar donde pueda poner en peligro la seguridad del pasajero acompañante.*
- *Al instalar el mando rotativo, asegúrese de no dañar los cables de electricidad, etc., del otro lado de la superficie de montaje.*
- *Procure no instalar el mando rotativo en un lugar expuesto a altas temperaturas, como a la luz solar directa o al aire caliente de la calefacción, etc.*

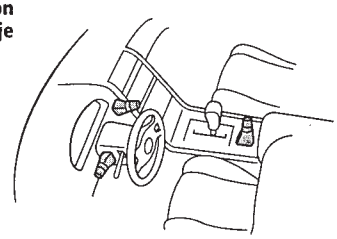
Installera vridkontrollen

Observera
- *Var noga med var du monterar vridkontrollen så att den inte är i vägen när du kör.*
- *Installera inte vridkontrollen där den är en säkerhetsrisk för passagerare i framsätet.*
- *Var försiktig när du installerar vridkontrollen så att du inte skadar elkablar eller liknande på monteringsytans baksida.*
- *Undvik att installera vridkontrollen så att den utsätts för höga temperaturer, direkt solljus eller stark värme från värmefläkten osv.*

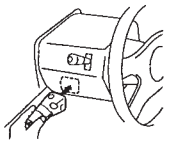
Instalação do comando rotativo

Notas
- *Seleccione cuidadosamente o local de montagem de forma a que o comando rotativo não interfira com a condução do automóvel.*
- *Não instale o comando rotativo em locais onde este possa, por algum motivo, pôr em perigo a segurança do passageiro da frente.*
- *Quando da instalação do comando rotativo, certifique-se de que não danifica os fios eléctricos, etc., localizados no outro lado da superfície de montagem.*
- *Evite instalar o comando rotativo em locais em que este fique exposto a temperaturas elevadas causadas, por exemplo, pela incidência directa dos raios solares, pelo ar quente do aquecimento, etc.*

Example of a mounting location
Ejemplo de un lugar de montaje
Monteringsexempel
Exemplo de um local para montagem



1



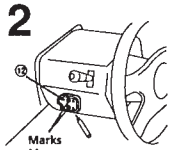
Choose the exact location for the rotary commander to be mounted, then clean the mounting surface.
Dirt or oil impair the adhesive strength of the double-sided adhesive tape.

Una vez elegido el lugar de montaje del mando rotativo, limpie previamente la superficie de montaje.
La suciedad o la grasa dañan la intensidad adhesiva de la tira adhesiva por las dos caras.

Välj var du vill montera vridkontrollen och rengör ytan.
Smuts eller olja minskar den dubbelsidiga tejpens fästförmåga.

Escolha o local exacto onde deseja montar o comando rotativo e depois limpe a superfície de montagem.
A sujidade ou o óleo enfraquecem as capacidades adesivas da fita adesiva dupla.

2



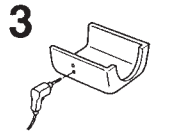
Mark position for the supplied screws.
Use the screw holes on the mounting hardware ⑫ to mark the positions.

Marque la posición para los tornillos suministrados.
Para ello, utilice el orificios para tornillo de la ferretería de montaje ⑫.

Markera var du ska borra hål för skruvarna.
Du kan göra markeringarna utifrån skruvhålet på monteringsdelen ⑫.

Marque a posição para os parafusos fornecidos.
Para marcar a posição, utilize os orifícios dos parafusos do material de montagem ⑫.

3



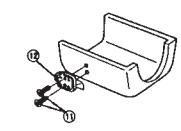
Remove the steering wheel column cover, and drill 2 mm diameter holes where you have marked.

Extraiga la cubierta de la columna de la dirección y haga orificios de 2 mm. de diámetro en los lugares marcados.

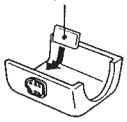
Ta loss höljet som skyddar rattens styrstång och borra hål med 2 mm diameter där du har gjort markeringarna.

Retire a cobertura da coluna da direcção e faça furos com 2 mm de diâmetro nos locais marcados.

4



Heavy duty tape, etc.
Cinta adhesiva resistente, etc.
Maskeringstejp eller liknande
Fita adesiva, etc.



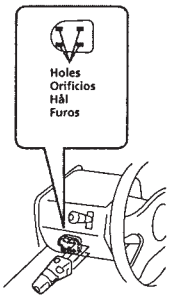
Warm the mounting surface and the double-sided adhesive tape on the mounting hardware ⑫ to the temperature of 20 °C to 30 °C, and attach the mounting hardware onto the mounting surface by applying even pressure. Then screw it down with the supplied screws ⑪.
Attach a piece of heavy duty tape, etc. on the other side of the mounting surface to cover the protruding tips of the screws so that they will not interfere with the electrical cables, etc. inside the steering wheel column.

Caliente la superficie de montaje y la cinta adhesiva de doble cara de la ferretería de montaje ⑫ a una temperatura entre 20 °C y 30 °C, y ajuste la ferretería de montaje a la superficie de montaje ejerciendo una presión uniforme. A continuación, apriete los tornillos ⑪ suministrados.
Adhiera un trozo de cinta adhesiva resistente, etc., en el otro lado de la superficie de montaje para cubrir los extremos de los tornillos que sobresalgan, de forma que no interfieran con los cables de electricidad, etc., del interior de la columna de dirección.

Värm monteringsytan och den dubbelsidiga tejpen på monteringsdelen ⑫ till mellan 20 °C och 30 °C och tryck fast monteringsdelen. Skruva sedan fast den med de medföljande skruvarna ⑪.
Använd kraftig tejp för att täcka över skruvspetsarna på monteringsytans baksida så att de inte skaver mot elkablar eller liknande innanför rattstångskåpan.

Aqueça a superfície de montagem e a fita adesiva dupla do material de montagem ⑫ até uma temperatura de 20 °C a 30 °C, e fixe o material de montagem na superfície respectiva exercendo uma pressão uniforme. Em seguida, fixe-o com os parafusos ⑪ fornecidos.
Coloque um pouco de fita adesiva, etc. no outro lado da superfície de

5



After installing the steering wheel column cover, attach the rotary commander to the mounting hardware by aligning the four holes on the bottom of the rotary commander to the four catches on the mounting hardware and sliding the rotary commander until it locks into place as illustrated.

Note
If you are mounting the rotary commander to the steering wheel column, make sure that the protruding tips of the screws on the inner surface of the column do not in anyway hinder or interfere with the movement of the rotating shaft, operative parts of the switches or the electrical cables, etc. inside the column.

Una vez instalada la cubierta de la columna de dirección, fije el mando rotativo a la ferretería de montaje alineando los cuatro orificios de la parte inferior del mando con los cuatro enganches de la ferretería de montaje. A continuación, deslice el mando hasta que encaje en su sitio como se muestra en la ilustración.

Nota
Si monta el mando rotativo en la columna de dirección, asegúrese de que los extremos de los tornillos que sobresalgan de la superficie interior de la columna no dificulten el movimiento del eje de rotación ni los componentes operativos de los conmutadores o los cables de electricidad, etc., del interior de la columna.

När du har satt tillbaka rattstångskåpan fäster du vridkontrollen på monteringsdelen genom att justera de fyra hålen på kontrollens undersida efter de fyra spärrarna på monteringsdelen och skjuta ned kontrollen tills den låses på plats, se bilden.

Observera
Om du monterar vridkontrollen på höljet till rattens styrstång måste du se till att de utskjutande skruvspetsarna inuti höljet inte hindrar styrningen av bilen eller kommer i vägen för annan utrustning eller elkablarna inuti höljet.

Após a instalação da cobertura da coluna da direcção, fixe o comando rotativo ao material de montagem, alinhando os quatro orifícios da extremidade inferior do comando com as quatro ganchos do material de montagem e fazendo deslizar o comando até que este se fixe correctamente, conforme o ilustrado.

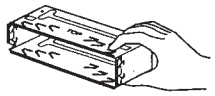
Nota
Se montar o comando rotativo na coluna da direcção, certifique-se de que as extremidades dos parafusos na superfície interior da coluna não prejudicam ou interferem com o movimento do eixo rotativo, com as partes operativas dos comutadores ou com os cabos eléctricos, etc., localizados no interior da coluna.

Caution
Cautionary notice for handling the bracket ①.
Handle the bracket carefully to avoid injuring your fingers.

Precaución
Advertencia sobre la manipulación del soporte ①.
Tenga mucho cuidado al manipular el soporte para evitar posibles lesiones en los dedos.

Varning
Att observera angående konsolen ①.
Hantera konsolen med största aktsamhet så att du inte skadar fingrarna.

Cuidado
Aviso sobre as precauções a tomar no manuseamento do suporte ①.
Pegue no suporte com cuidado para não magoar os dedos.

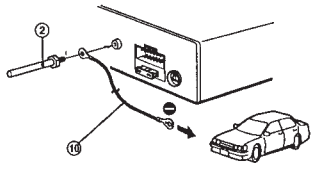


Note for connecting
If there is alternator noise (a whining sound when the engine increases speed), earth the master unit by connecting it to a metal point of the car with the supplied chassis earth cord ⑩. Connect the earth cord to the master unit with part ② as shown in the illustration.
You can use part ⑦ to connect the earth cord to the master unit instead of part ②.

Nota sobre conexión
Si el alternador emite ruido (un zumbido al aumentar la velocidad del motor), conecte la unidad principal a tierra y, para ello, enchúfela a un punto de metal del automóvil mediante el cable de toma a tierra de chasis ⑩ suministrado. Conecte el cable de toma a tierra a la unidad principal con la pieza ② como se muestra en la ilustración.
Puede utilizar la pieza ⑦ para conectar el cable de toma a tierra a la unidad principal en lugar de la pieza ②.

Angående anslutningar
Om motorn ger störningar (ett vinande ljud när du gasar) bör du jorda huvudenheten till en metallpunkt på bilen med den medföljande chassijordkabeln ⑩. Anslut jordkabeln till huvudenheten med jordkontakten ② enligt bilden.
Du kan använda del ⑦ istället för del ② när du vill ansluta den jordade kabeln till huvudenheten.

Nota sobre a ligação
Se o alternador começar a produzir ruídos (um som agudo durante o aumento da velocidade do motor), ligue a unidade principal à terra. Para tal, ligue o cabo de massa do chassis ⑩ fornecido a um ponto metálico do automóvel. Ligue o cabo de massa ao aparelho principal com a peça ②, como se mostra na ilustração.
Em vez da peça ②, pode utilizar a peça ⑦ para ligar o cabo de massa à unidade principal.



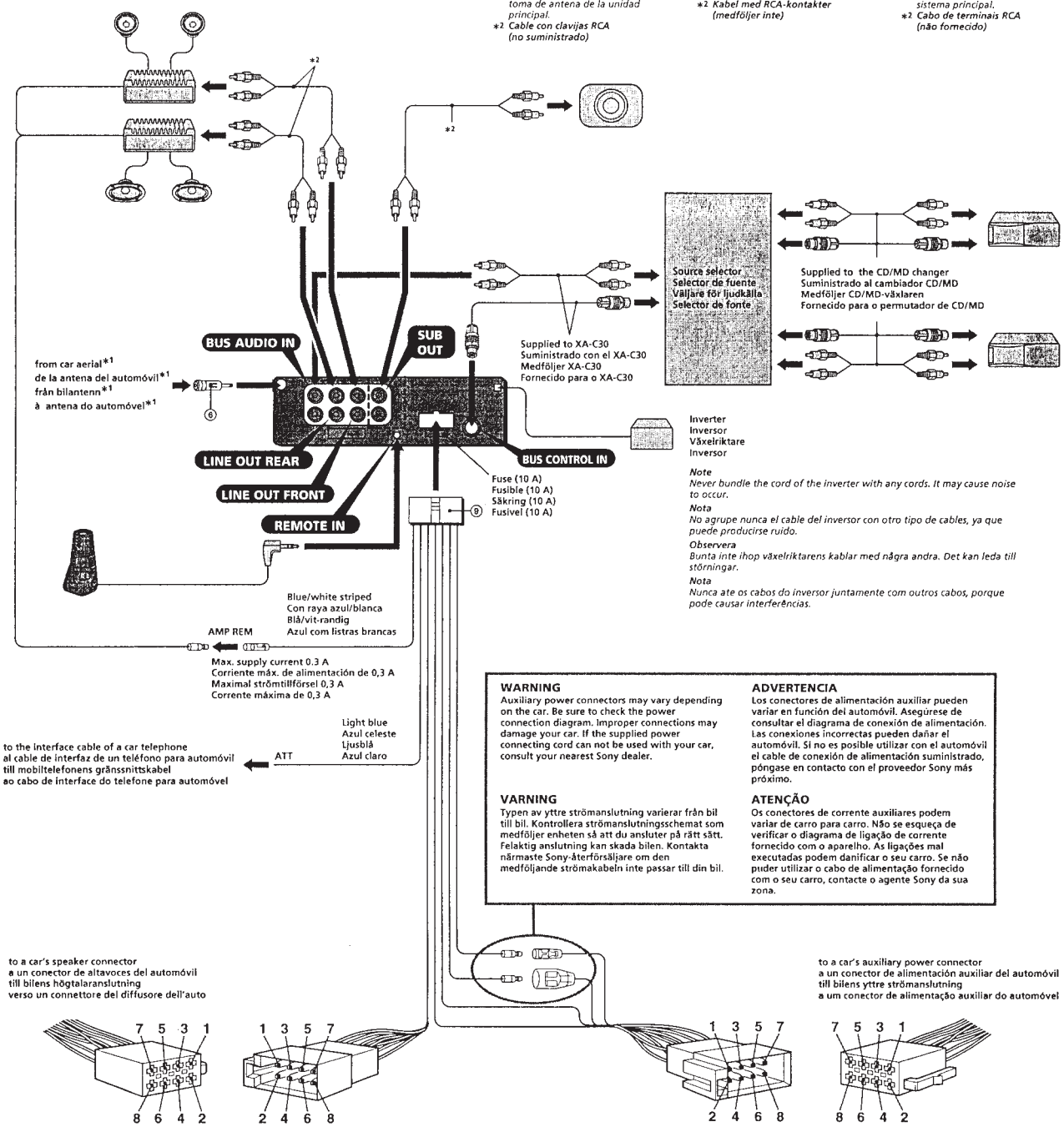
Connection example
Ejemplo de conexiones
Anslutningsexempel
Exemplo de ligações

*1 *Note for the aerial connecting*
If your car aerial is an ISO (International Organization for Standardization) type, use the supplied adapter ⑥ to connect it. First connect the car aerial to the supplied adapter, then connect it to the aerial jack of the master unit.
*2 *RCA pin cord (not supplied)*

*1 *Nota sobre la conexión de la antena*
Si la antena del automóvil es del tipo ISO (International Organization for Standardization), emplee el adaptador suministrado ⑥ para conectarla.
En primer lugar, conecte la antena del automóvil al adaptador suministrado y, a continuación, a la toma de antena de la unidad principal.
*2 *Cable con clavijas RCA (no suministrado)*

*1 *Angående antennanslutning*
Om motorantennen är av ISO-typ (International Organization for Standardization), använder du medföljande adapter ⑥ för att ansluta den.
Anslut först motorantennen till medföljande adapter och därefter till antennuttaget på huvudenheten.
*2 *Kabel med RCA-kontakter (medföljer inte)*

*1 *Nota referente à ligação da antena*
Se a antena do automóvel for uma antena de tipo ISO (International Organization for Standardization), utilize o adaptador fornecido ⑥ para fazer a ligação respectiva.
Ligue primeiro a antena do automóvel ao adaptador fornecido e depois à ficha tipo jack de antena do sistema principal.
*2 *Cabo de terminais RCA (não fornecido)*



Note
Never bundle the cord of the inverter with any cords. It may cause noise to occur.
Nota
No agrupe nunca el cable del inversor con otro tipo de cables, ya que puede producirse ruido.
Observera
Bunta inte ihop växelriktarens kablar med några andra. Det kan leda till störningar.
Nota
Nunca ate os cabos do inversor juntamente com outros cabos, porque pode causar interferências.

WARNING
Auxiliary power connectors may vary depending on the car. Be sure to check the power connection diagram. Improper connections may damage your car. If the supplied power connecting cord can not be used with your car, consult your nearest Sony dealer.

ADVERTENCIA
Los conectores de alimentación auxiliar pueden variar en función del automóvil. Asegúrese de consultar el diagrama de conexión de alimentación. Las conexiones incorrectas pueden dañar el automóvil. Si no es posible utilizar con el automóvil el cable de conexión de alimentación suministrado, póngase en contacto con el proveedor Sony más próximo.

VARNING
Typen av yttre strömanslutning varierar från bil till bil. Kontrollera strömanslutningsschemat som medföljer enheten så att du ansluter på rätt sätt. Felaktig anslutning kan skada bilen. Kontakta närmaste Sony-återförsäljare om den medföljande strömkabeln inte passar till din bil.

ATENÇÃO
Os conectores de corrente auxiliares podem variar de carro para carro. Não se esqueça de verificar o diagrama de ligação de corrente fornecido com o aparelho. As ligações mal executadas podem danificar o seu carro. Se não puder utilizar o cabo de alimentação fornecido com o seu carro, contacte o agente Sony da sua zona.

to a car's speaker connector
a un conector de altavoces del automóvil
till bilens högtalaranslutning
verso un connettore del diffusore dell'auto
to a car's auxiliary power connector
a un conector de alimentación auxiliar del automóvil
till bilens yttre strömanslutning
a um conector de alimentação auxiliar do automóvel
7 5 3 1
8 6 4 2
1 3 5 7
2 4 6 8
1 3 5 7
2 4 6 8
7 5 3 1
8 6 4 2

1	Purple Púrpura Violett Violeta	+	Speaker, Rear, Right Altavoz, parte posterior, derecho Högtalare, bakre, höger Altifalante, Parte de trás, Direito	5	White Blanco Vit Branco	+	Speaker, Front, Left Altavoz, parte frontal, izquierdo Högtalare, främre, vänster Altifalante, Parte da frente, Esquerdo
2		–	Speaker, Rear, Right Altavoz, parte posterior, derecho Högtalare, bakre, höger Altifalante, Parte de trás, Direito	6		–	Speaker, Front, Left Altavoz, parte frontal, izquierdo Högtalare, främre, vänster Altifalante, Parte da frente, Esquerdo
3	Grey Gris Grå Cinza	+	Speaker, Front, Right Altavoz, parte frontal, derecho Högtalare, främre, höger Altifalante, Parte da frente, Direito	7	Green Verde Grön Verde	+	Speaker, Rear, Left Altavoz, parte posterior, izquierdo Högtalare, bakre, vänster Altifalante, Parte de trás, Esquerdo
4		–	Speaker, Front, Right Altavoz, parte frontal, derecho Högtalare, främre, höger Altifalante, Parte da frente, Direito	8		–	Speaker, Rear, Left Altavoz, parte posterior, izquierdo Högtalare, bakre, vänster Altifalante, Parte de trás, Esquerdo

4	Yellow Amarillo Gul Amarelo	continuous power supply suministro de alimentación continua kontinuerlig strömförsörjning alimentação de corrente continua	7	Red Rojo Röd Vermelho	switched power supply suministro conmutado de alimentación switchad strömförsörjning alimentação de corrente comutada
5	Blue Azul Blå Azul	power aerial control control de antena motorizada antennens kontrollkabel antena eléctrica	8	Black Negro Svart Preto	earth toma de tierra jord terra
6	Orange/White Naranja/blanco Orange/vit Cor de laranja/branco	switched illumination power supply fuente de alimentación de iluminación conmutada switchad strömförsörjning till belysning fonte de alimentação comutada para iluminação			

Positions 1, 2 and 3 do not have pins.
Las posiciones 1, 2 y 3 no disponen de pines.
Positionerna 1, 2 och 3 saknar stift.
As posições 1, 2 e 3 não têm pinos.

Negative polarity positions 2, 4, 6, and 8 have striped cords.
Las posiciones de polaridad negativa 2, 4, 6 y 8 tienen cables con raya.
De negativa polpositionerna 2, 4, 6 och 8 har randiga kablar.
As posições 2, 4, 6 e 8 (polaridade negativa) têm cabos às riscas.

Power connection diagram

Auxiliary power connector may vary depending on the car. Check your car's auxiliary power connector diagram to make sure the connections match correctly. There are three basic types (illustrated below). You may need to switch the positions of the red and yellow leads in the car stereo's power connecting cord.
After matching the connections and switched power supply leads correctly, connect the unit to the car's power supply. If you have any questions and problems connecting your unit that are not covered in this manual, please consult the car dealer.

Diagrama de conexión de alimentación

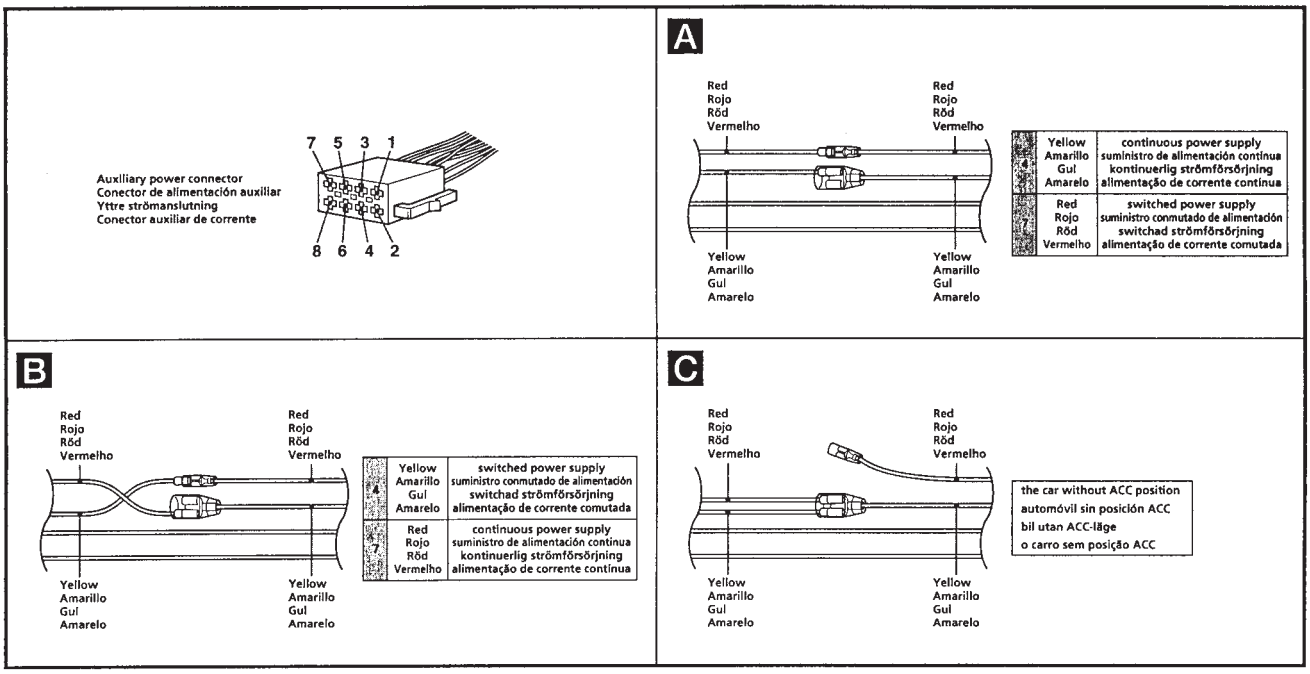
El conector de alimentación auxiliar puede variar en función del automóvil. Compruebe el diagrama del conector de alimentación auxiliar del automóvil para asegurarse de que las conexiones coinciden correctamente. Existen tres tipos básicos, ilustrados a continuación. Es posible que sea preciso cambiar las posiciones de los cables rojo y amarillo del cable de conexión de alimentación del sistema estéreo del automóvil.
Después de hacer coincidir correctamente las conexiones y los cables de alimentación conmutada, conecte la unidad al suministro de alimentación del automóvil. Si desea realizar alguna consulta o solucionar algún problema referentes a la conexión de la unidad que no aparezcan en este manual, consulte con el concesionario automovilístico.

Strömanslutningsschema

Typen av yttre strömanslutning varierar från bil till bil. Kontrollera schemat till strömanslutningen så att du ansluter på rätt sätt. Det finns tre grundläggande anslutningstyper (visas nedan). Eventuellt kan du behöva byta plats på de röda och gula ledarna i bilstereons strömanslutningskabel.
Koppla kablarna för kontinuerlig respektive switchad strömförsörjning på rätt sätt och anslut sedan enheten till bilens strömanslutning. Om du får problem eller har frågor som inte besvaras i den här bruksanvisningen kan du kontakta bilåterförsäljaren.

Diagrama de ligação de corrente

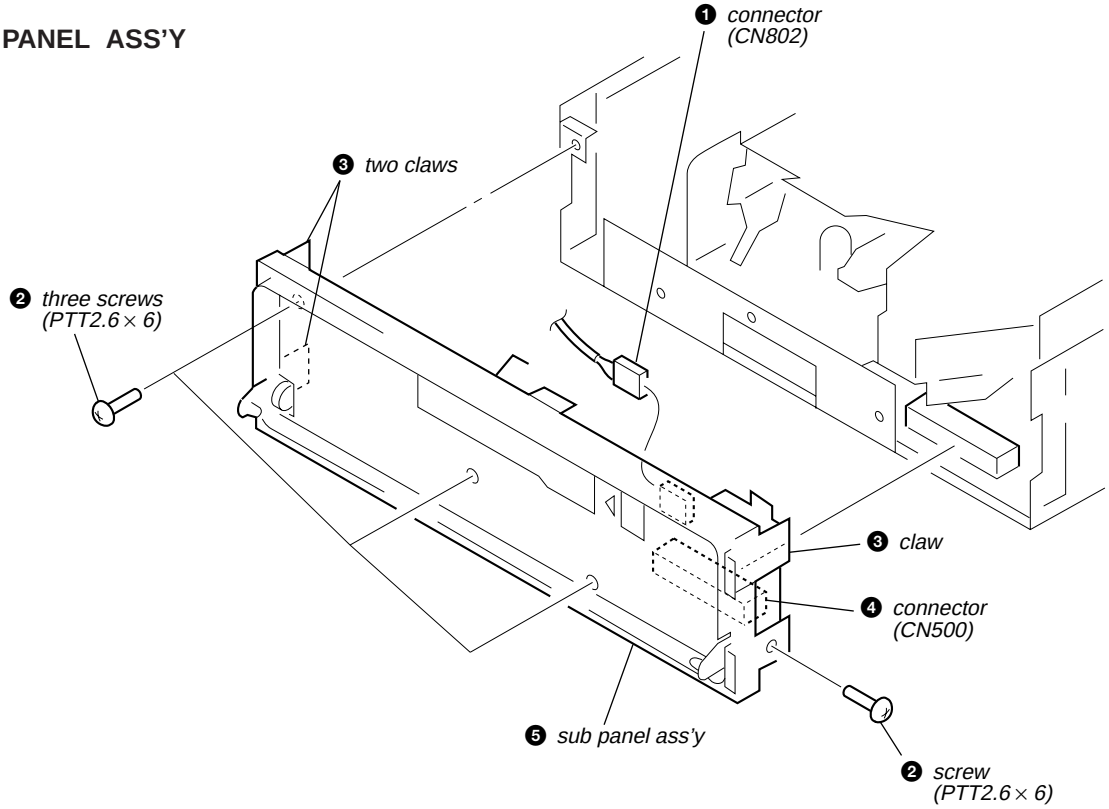
O conector auxiliar de corrente pode variar de carro para carro. Verifique o diagrama do conector auxiliar de corrente do seu automóvel para se certificar de que as ligações estão bem feitas. Existem três tipos de conectores (ilustrados abaixo). Pode ter que mudar as posições dos fios vermelho e amarelo do cabo de ligação da alimentação do sistema estéreo do automóvel.
Depois de fazer a correspondência entre as ligações e os pinos de alimentação de corrente comutada, ligue o aparelho à fonte de alimentação do carro. Se tiver alguma dúvida ou problema relacionado com o aparelho que não esteja incluído neste manual, consulte o concessionário.


Auxiliary power connector
Conector de alimentación auxiliar
Yttre strömanslutning
Conector auxiliar de corrente
7 5 3 1
8 6 4 2
A
Red
Rojo
Röd
Vermelho
Yellow
Amarillo
Gul
Amarelo
4 Yellow Amarillo Gul Amarelo continuous power supply suministro de alimentación continua kontinuerlig strömförsörjning alimentação de corrente continua
7 Red Rojo Röd Vermelho switched power supply suministro conmutado de alimentación switchad strömförsörjning alimentação de corrente comutada
B
4 Yellow Amarillo Gul Amarelo switched power supply suministro conmutado de alimentación switchad strömförsörjning alimentação de corrente comutada
7 Red Rojo Röd Vermelho continuous power supply suministro de alimentación continua kontinuerlig strömförsörjning alimentação de corrente contínua
C
the car without ACC position
automóvil sin posición ACC
bil utan ACC-läge
o carro sem posição ACC

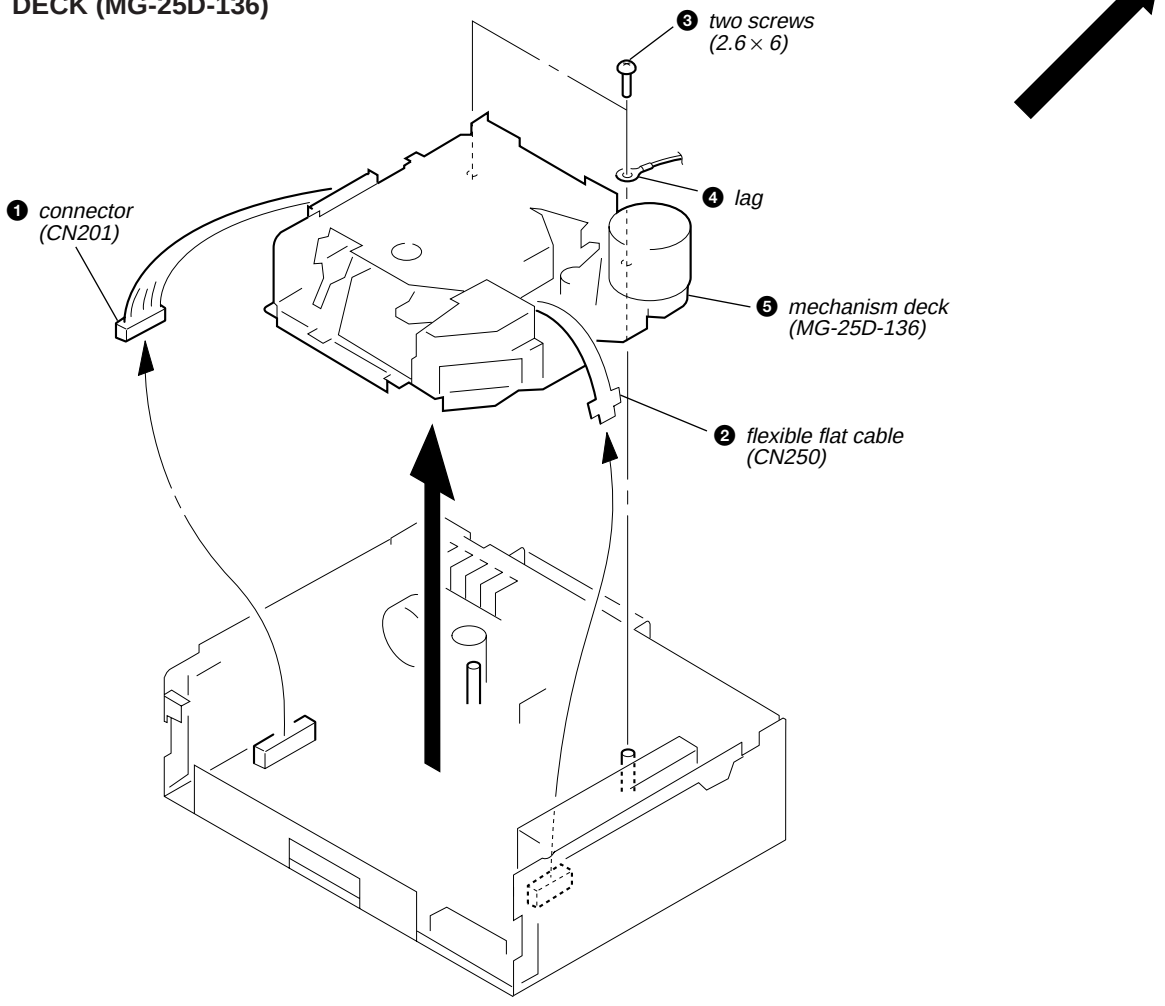
SECTION 3
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

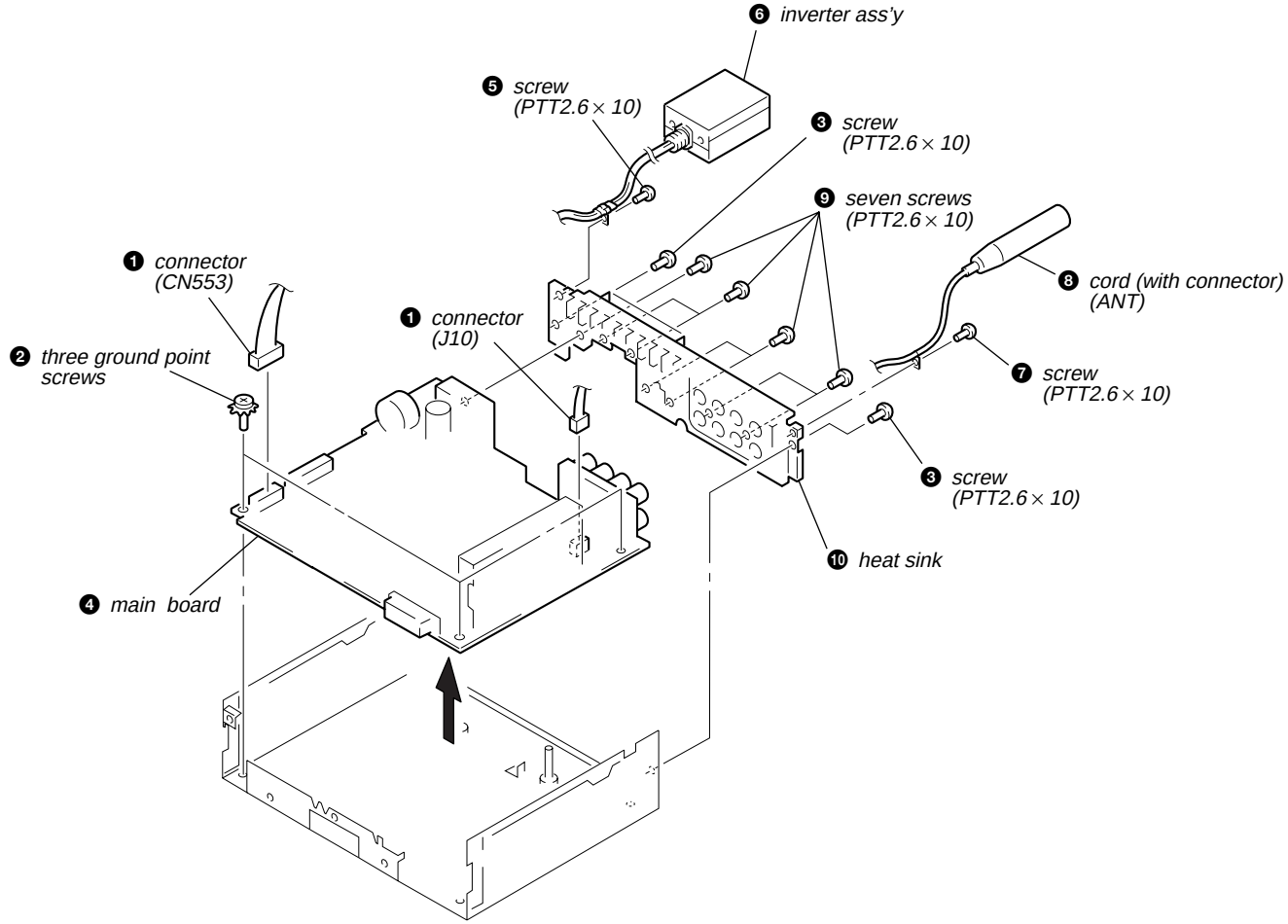
SUB PANEL ASS'Y



MECHANISM DECK (MG-25D-136)



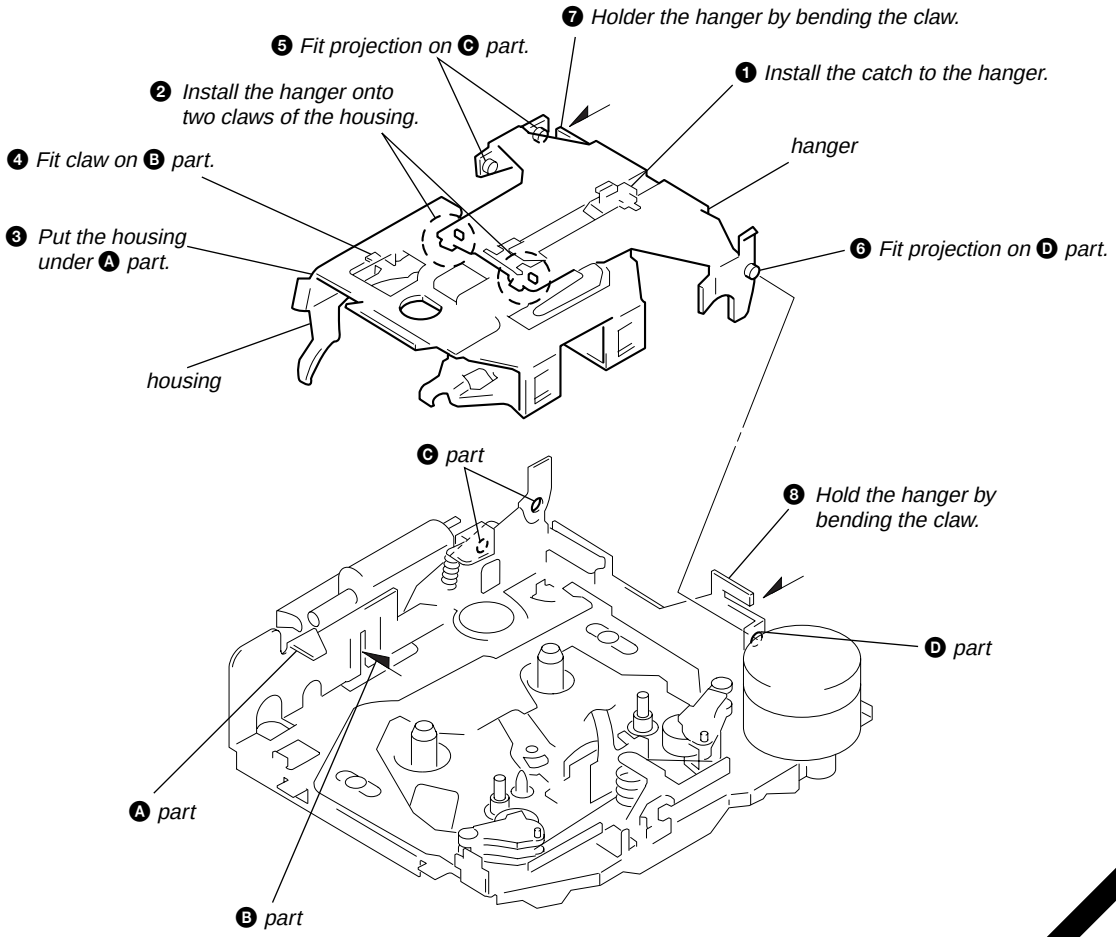
MAIN BOARD, HEAT SINK


❻ inverter ass'y
❺ screw (PTT2.6 × 10)
❸ screw (PTT2.6 × 10)
❾ seven screws (PTT2.6 × 10)
❶ connector (CN553)
❶ connector (J10)
❽ cord (with connector) (ANT)
❷ three ground point screws
❼ screw (PTT2.6 × 10)
❸ screw (PTT2.6 × 10)
❿ heat sink
❹ main board

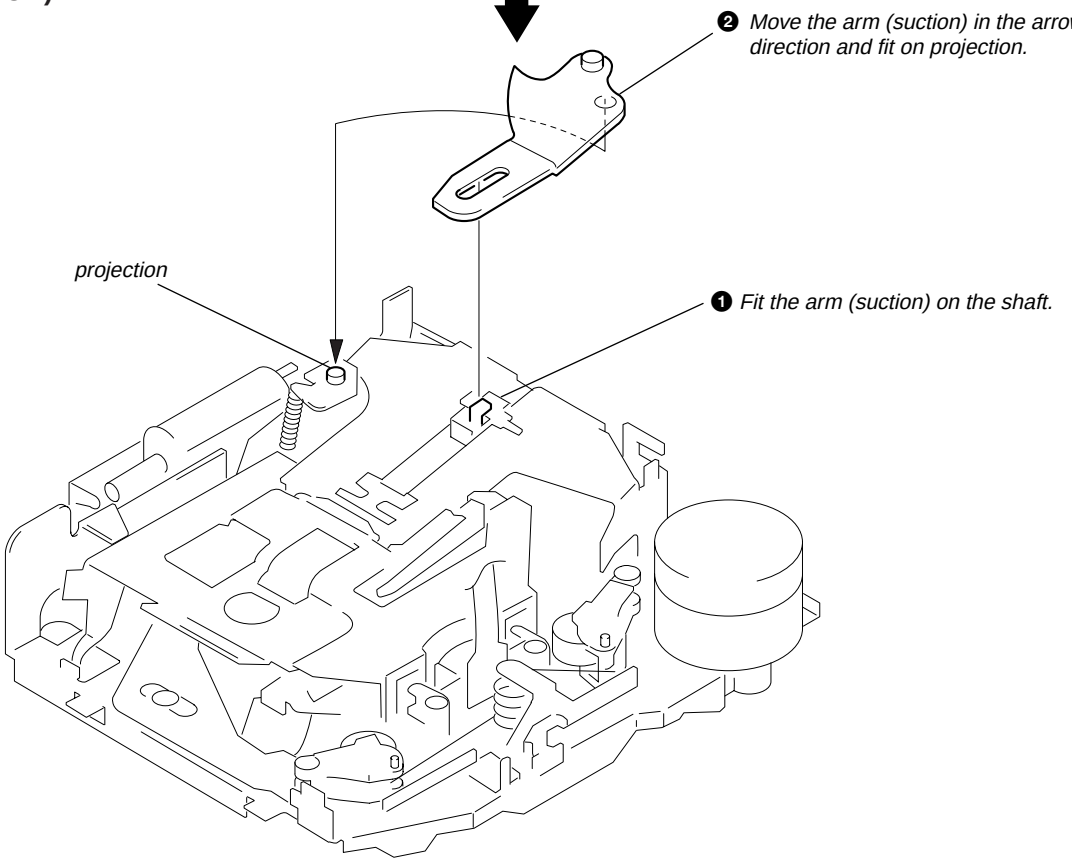
SECTION 4
ASSEMBLY OF MECHANISM DECK

Note: Follow the assembly procedure in the numerical order given.

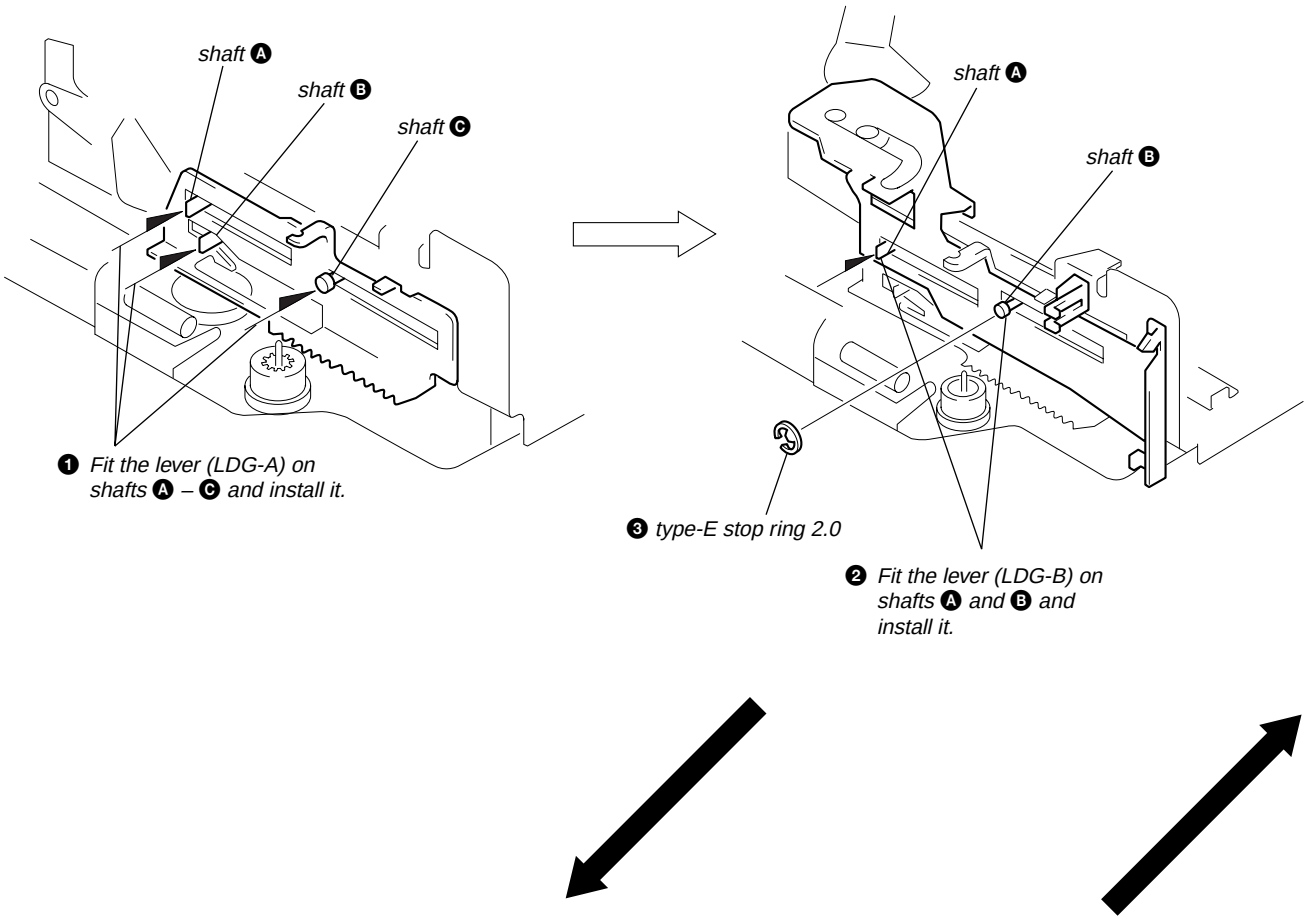
HOUSING


❼ Holder the hanger by bending the claw.
❺ Fit projection on Ⓒ part.
❶ Install the catch to the hanger.
❷ Install the hanger onto two claws of the housing.
hanger
❹ Fit claw on Ⓑ part.
❸ Put the housing under Ⓐ part.
❻ Fit projection on Ⓓ part.
housing
Ⓒ part
❽ Hold the hanger by bending the claw.
Ⓓ part
Ⓐ part
Ⓑ part

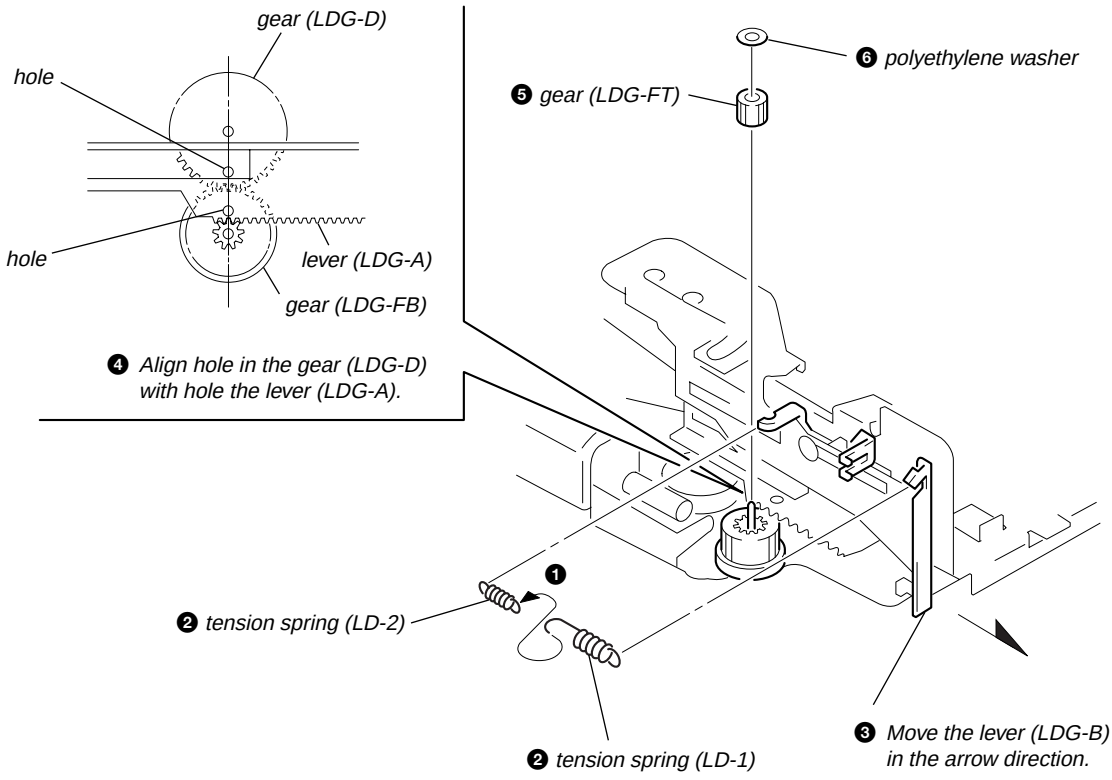
ARM (SUCTION)



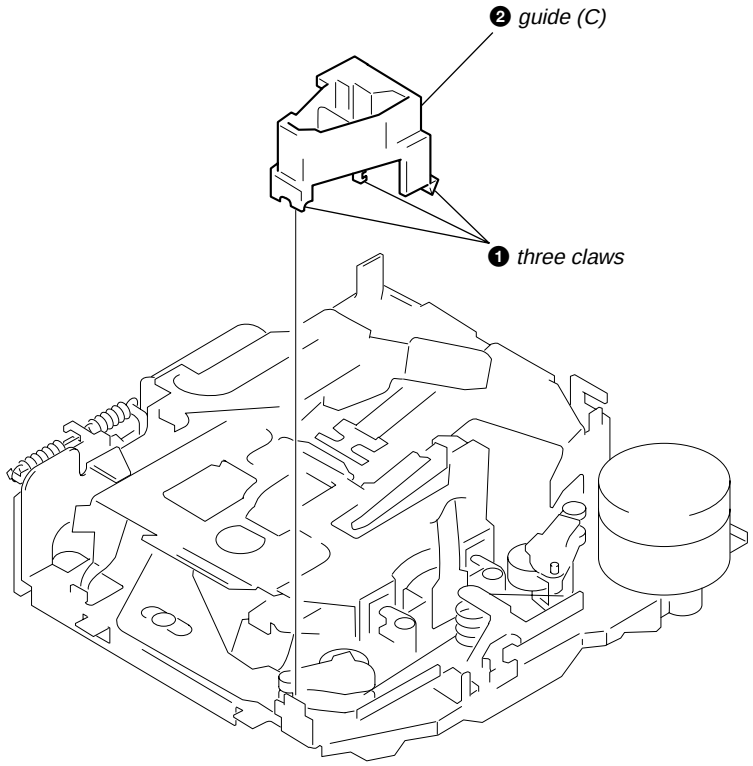
LEVER (LDG-A)/(LDG-B)


shaft Ⓐ
shaft Ⓑ
shaft Ⓒ
❶ Fit the lever (LDG-A) on shafts Ⓐ – Ⓒ and install it.
shaft Ⓐ
shaft Ⓑ
❸ type-E stop ring 2.0
❷ Fit the lever (LDG-B) on shafts Ⓐ and Ⓑ and install it.

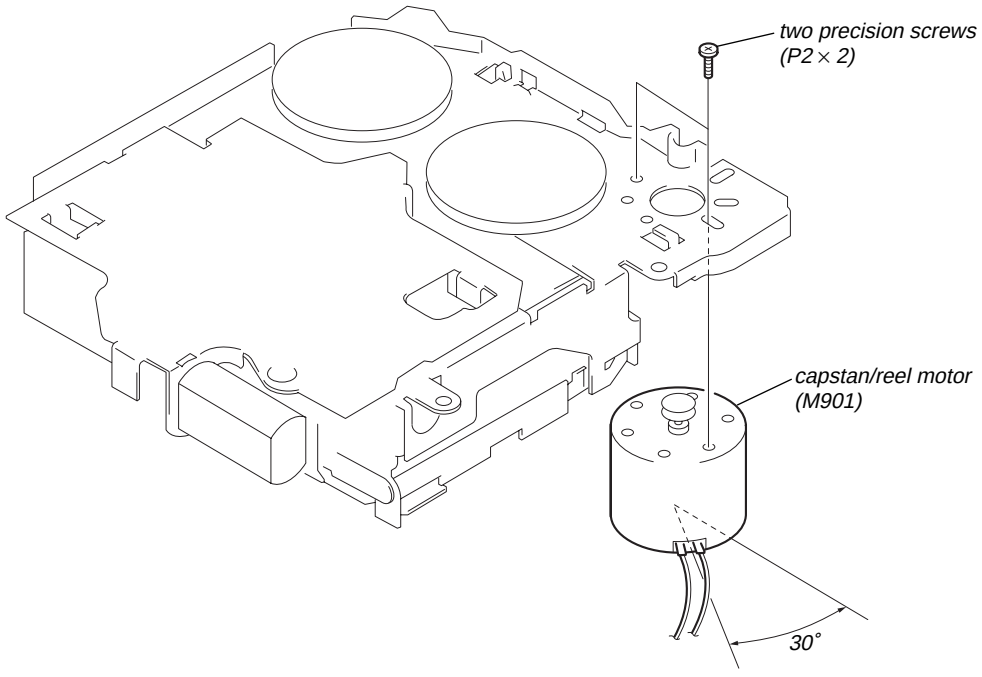
GEAR (LDG-FT)



GUIDE (C)



MOUNTING POSITION OF CAPSTAN/REEL MOTOR (M901)



SECTION 5
MECHANICAL ADJUSTMENTS

1. Clean the following parts with a denatured-alcohol-moistened swab:
   playback head pinch roller
   rubber belt capstan
   idler
2. Demagnetize the playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the power supply voltage unless otherwise noted.

• Torque Measurement

Mode	Torque Meter	Meter Reading
Forward	CQ-102C	30 – 65 g•cm (0.42 – 0.90 oz•inch)
Forward Back Tension	CQ-102C	0.5 – 4.5g•cm (0.01 – 0.06 oz•inch)
Reverse	CQ-102RC	30 – 65 g•cm (0.42 – 0.90 oz•inch)
Reverse Back Tension	CQ-102RC	0.5 – 4.5g•cm (0.01 – 0.06 oz•inch)
FF, REW	CQ-201B	60 – 200 g•cm (0.83 – 2.78 oz•inch)

• Tape Tension Measurement

Mode	Tension Meter	Meter Reading
Forward	CQ-403A	more than 90 g (more than 3.18 oz)
Reverse	CQ-403R	more than 90 g (more than 3.18 oz)

SECTION 6
ELECTRICAL ADJUSTMENTS

TEST MODE

This set have the test mode function. In the test mode, FM Auto Scan/Stop Level and MW Auto Scan/Stop Level adjustments can be performed easier than it in ordinary procedure.

<Set the Test Mode>

1. Set the "power select" switch (S600) is "A (ON)" position.
2. Turn ON the regulated power supply. (The clock is displayed)
   Note: Press the [OFF] button, if the clock is not displayed.
3. Push the preset [4] button.
4. Push the preset [5] button.
5. Press the preset [1] button for more than two seconds.
6. Then the display indicates all lights, the test mode is set.

<Release the Test mode>

1. Push the [OFF] button.
2. Return the "power select" switch (S600) to initially set position.

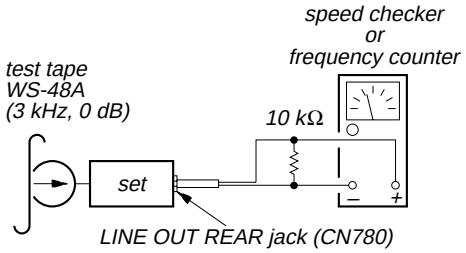
See the adjustment location from on page 22 for the adjustment.

TAPE DECK SECTION

0 dB=0.775 V

Tape Speed Adjustment

Setting:



Procedure:

1. Put the set into the FWD PB mode.
2. Adjust adjustment resistor for inside capstan motor so that the reading on the speed checker or frequency counter becomes in specification.

Specification: Constant speed

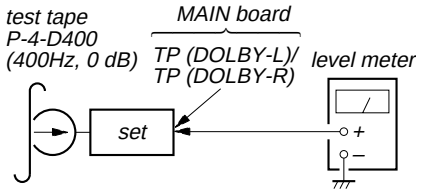
Speed checker	Frequency counter
–1.5 to +2.5%	2,955 to 3,075 Hz

Adjustment Location: See page 22.

Dolby Level Adjustment

Setting:

[SHIFT] button	: ON (light up SET UP and PLAY MODE)
Preset [4] (PLAY MODE) → [5] (→) buttons	: NR off
SOUND (BAS) button	: Center
SOUND (TRE) button	: Center
SOUND (BAL) button	: Center
SOUND (FAD) button	: Center
SOUND (VOL) button	: Maximum



Procedure:

1. Put the set into the FWD PB mode.
2. Adjust RV230 (L-CH) and RV240 (R-CH) so that the level meter reading is –6±0.5 dB (0.37 to 0.41 V).

Adjustment Location: See page 22.

TUNER SECTION

0 dB=1 µV

Cautions during repair
When the tuner unit is defective, replace it by a new one because its internal block is difficult to repair.

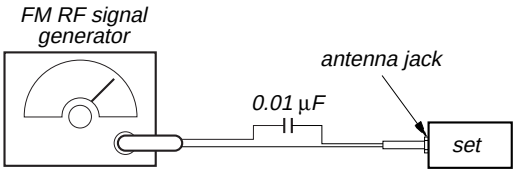
Note: Adjust the tuner section in the sequence shown below.

1. FM Auto Scan/Stop Level Adjustment
2. FM Stereo Separation Adjustment (Wide)
3. FM Stereo Separation Adjustment (Narrow)
4. FM RDS S-Meter Adjustment
5. MW Auto Scan/Stop Level Adjustment

FM Auto Scan/Stop Level Adjustment

Setting:

SOURCE button : FM

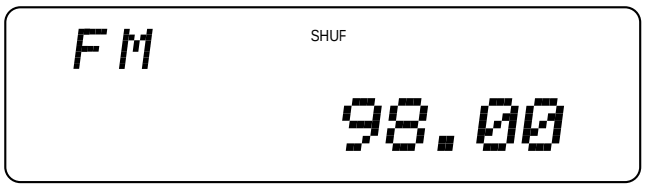


Carrier frequency : 98.00 MHz
Output level : 22 dB (12.6 µV)
Mode : mono
Modulation : 1 kHz, 22.5 kHz deviation (30%)

Procedure:

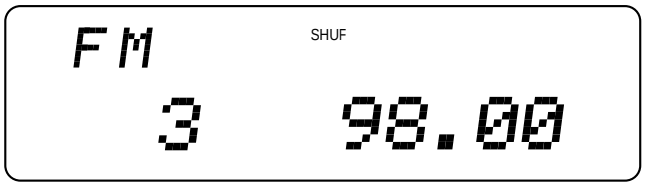
1. Set to the test mode. (See page 18)
2. Push the SOURCE button and set to FM.

Display



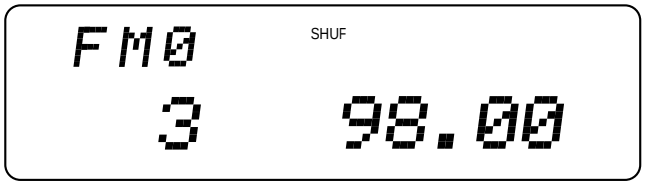
3. Push the preset 3 button.

Display



4. Adjust with the volume RV2 on TUX10 so that the “FM” indication turns to “FM0” indication on the display window. But, in case of already indicated “FM0”, turn the RV2 so that put out light “0” indication and adjustment.

Display

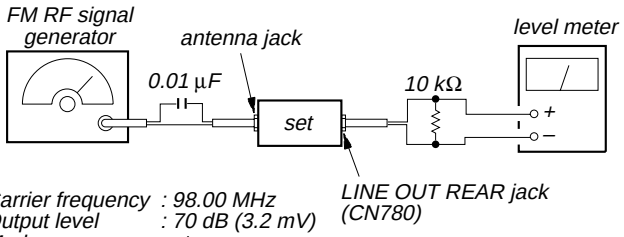


Adjustment Location: See page 22.

FM Stereo Separation Adjustment (Wide)

Setting:

SOURCE button : FM
SHIFT button : ON (light up SET UP and PLAY MODE)
Preset 4 (PLAY MODE)
→ 5 (→) buttons : WIDE mode



Carrier frequency : 98.00 MHz
Output level : 70 dB (3.2 mV)
Mode : stereo
Modulation : main : 1 kHz, 33.75 kHz deviation (45%)
sub : 1 kHz, 33.75 kHz deviation (45%)
19 kHz pilot: 7.5 kHz deviation (10%)

Procedure:

FM Stereo signal generator output channel	Level meter connection	Level meter reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV3 on TUX10 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV3 on TUX10 for minimum reading.

L-CH Stereo separation: Ⓐ-Ⓑ
R-CH Stereo separation: Ⓒ-Ⓓ
The separations of both channels should be equal.

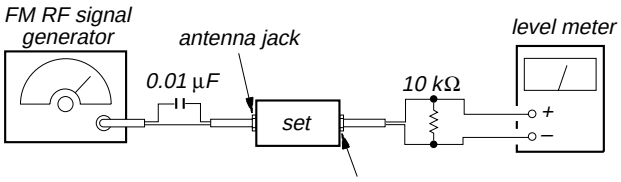
Specification: Separation more than 24 dB

Adjustment Location: See page 22.

FM Stereo Separation Adjustment (Narrow)

Setting:

SOURCE button : FM
SHIFT button : ON (light up SET UP and PLAY MODE)
Preset 4 (PLAY MODE)
→ 5 (→) buttons : NARROW mode



LINE OUT REAR jack (CN780)

Carrier frequency : 98.00 MHz
Output level : 70 dB (3.2 mV)
Mode : stereo
Modulation : main : 1 kHz, 20 kHz deviation (26.7%)
sub : 1 kHz, 20 kHz deviation (26.7%)
19 kHz pilot: 7.5 kHz deviation (10%)

Procedure:

FM Stereo signal generator output channel	Level meter connection	Level meter reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV4 on TUX10 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV4 on TUX10 for minimum reading.

L-CH Stereo separation: Ⓐ-Ⓑ
R-CH Stereo separation: Ⓒ-Ⓓ
The separations of both channels should be equal.

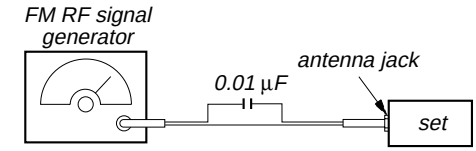
Specification: Separation more than 18 dB

Adjustment Location: See page 22.

FM RDS S-Meter Adjustment

Setting:

SOURCE button: FM

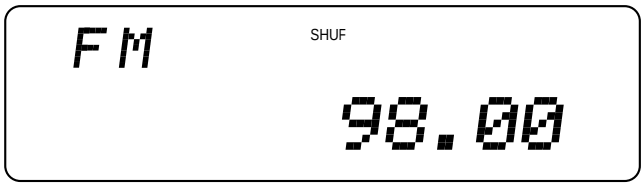


Carrier frequency : 98.00 MHz
Output level : 35 dB (56.2 µV)
Mode : mono
Modulation : no modulation

Procedure:

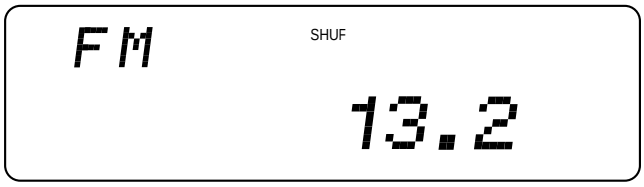
1. Set to the test mode. (See page 18)
2. Push the SOURCE button and set to FM.

Display



3. Push the 10 button.
4. Adjust RV10 so that the display indication is “13.2”.

Display



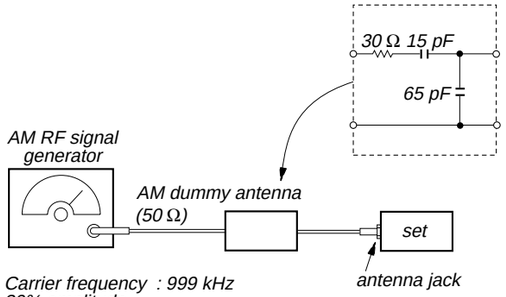
Specification: Display indication: 13.0 to 13.4

Adjustment Location: See page 22.

MW Auto Scan/Stop Level Adjustment

Setting:

SOURCE → MODE buttons : MW

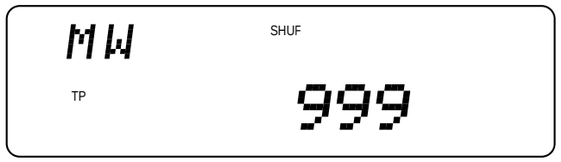


Carrier frequency : 999 kHz
30% amplitude modulation by 1 kHz signal
Output level : 33 dB (44.7 µV)

Procedure:

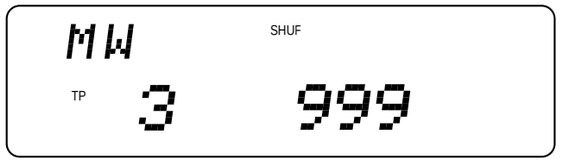
1. Set to the test mode. (See page 18)
2. Push the SOURCE button and set to FM.
3. Push the MODE button and set to MW.

Display



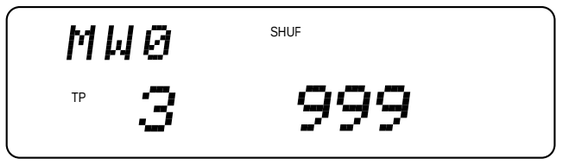
4. Push the preset 3 button.

Display



5. Adjust with the volume RV1 on TUX10 so that the “MW” indication turns to “MW0” indication on the display window. But, in case of already indicated “MW0”, turn the RV1 so that put out light “0” indication and adjustment.

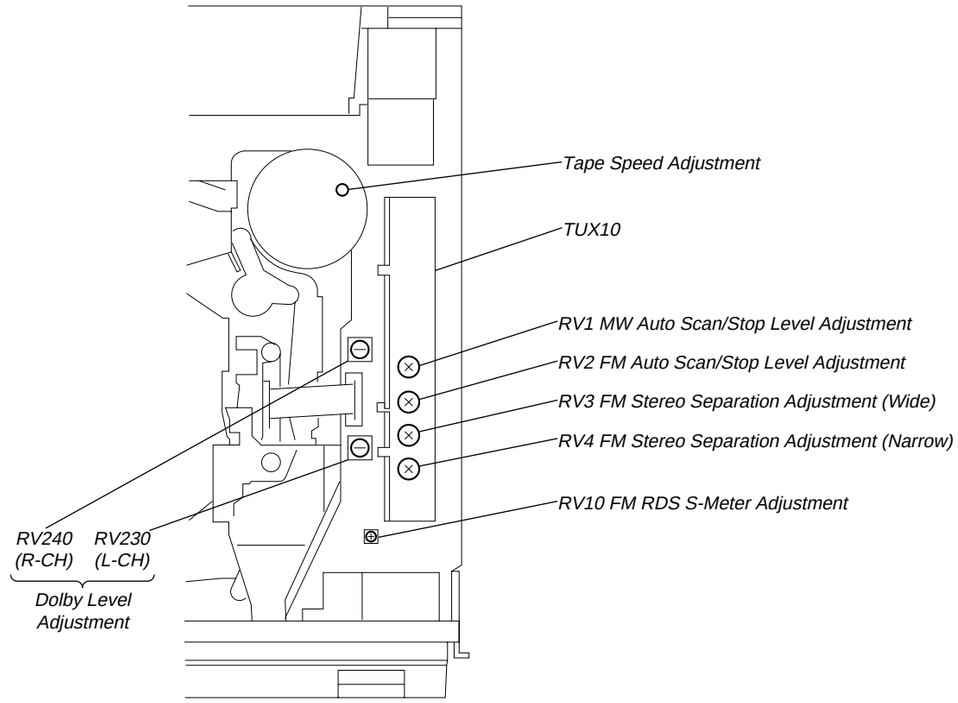
Display



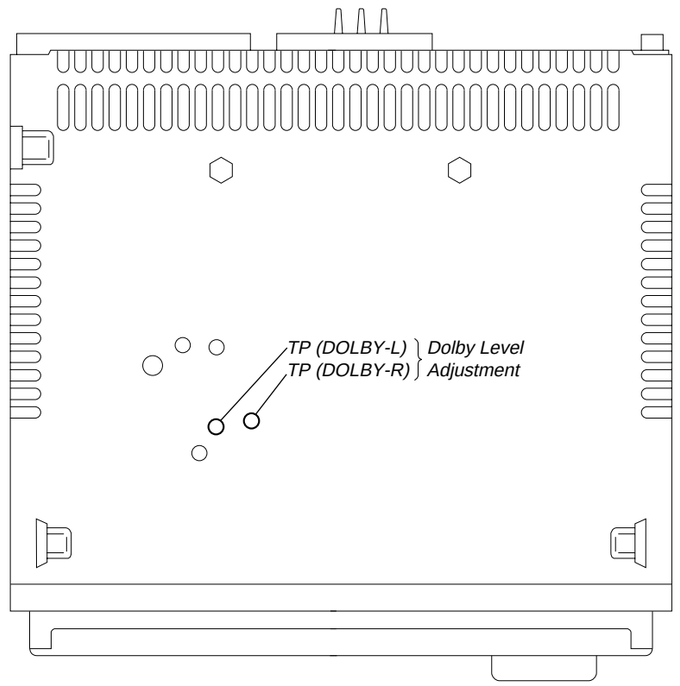
Adjustment Location: See page 22.

Adjustment Location:

– SET UPPER VIEW –

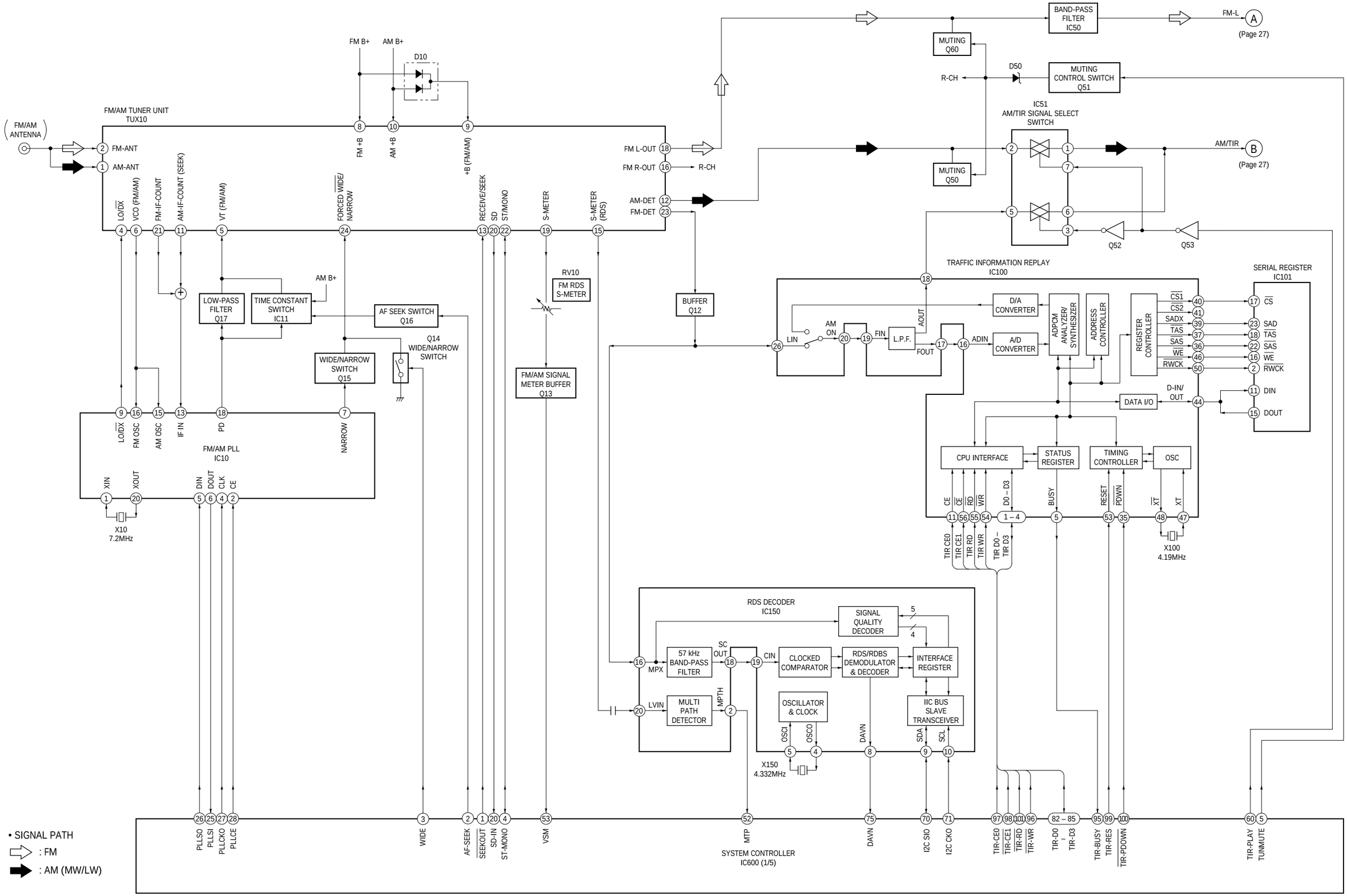

Tape Speed Adjustment
TUX10
RV1 MW Auto Scan/Stop Level Adjustment
RV2 FM Auto Scan/Stop Level Adjustment
RV3 FM Stereo Separation Adjustment (Wide)
RV4 FM Stereo Separation Adjustment (Narrow)
RV10 FM RDS S-Meter Adjustment
RV240 (R-CH)
RV230 (L-CH)
Dolby Level Adjustment

– SET BOTTOM VIEW –

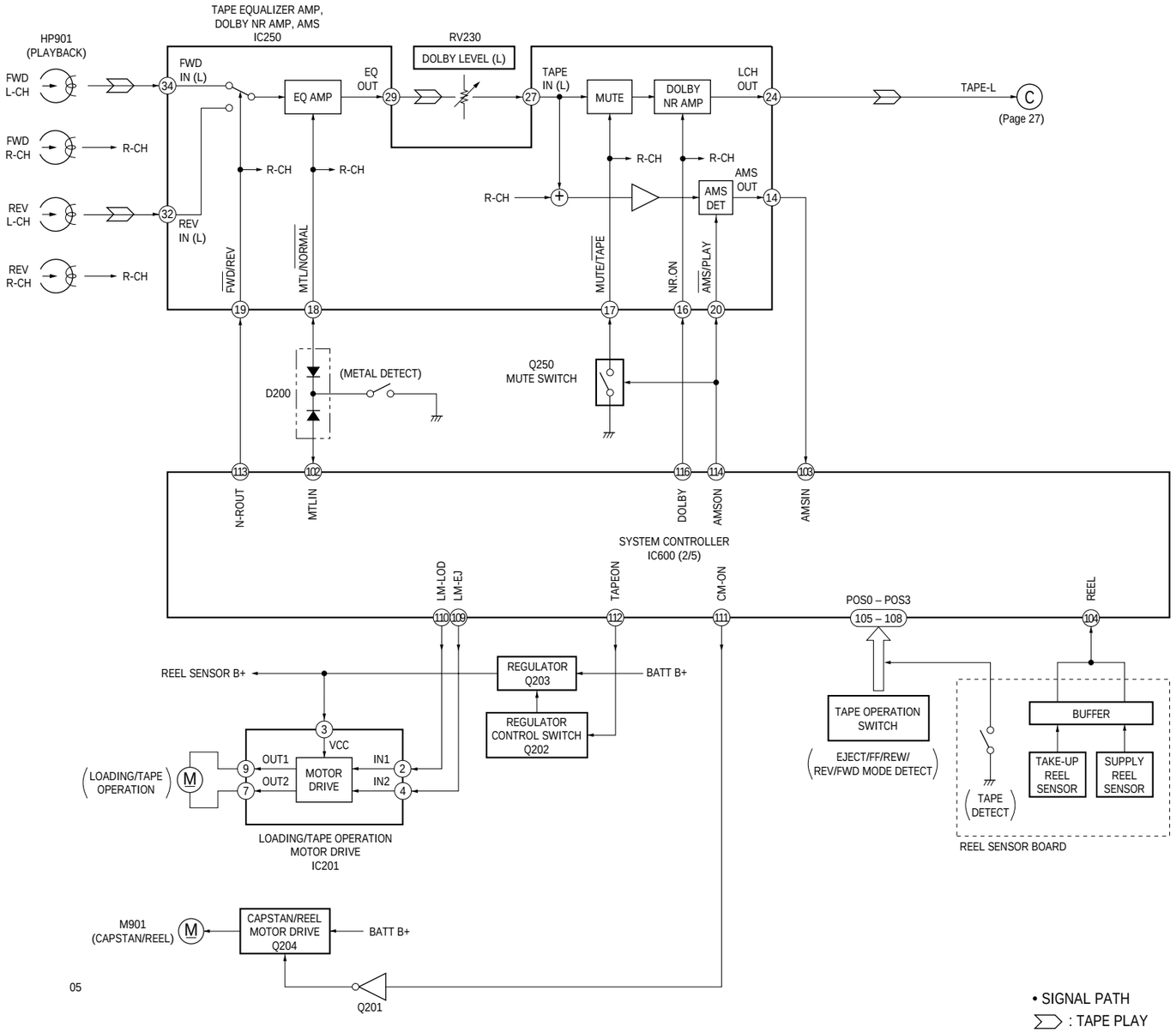


SECTION 7
DIAGRAMS

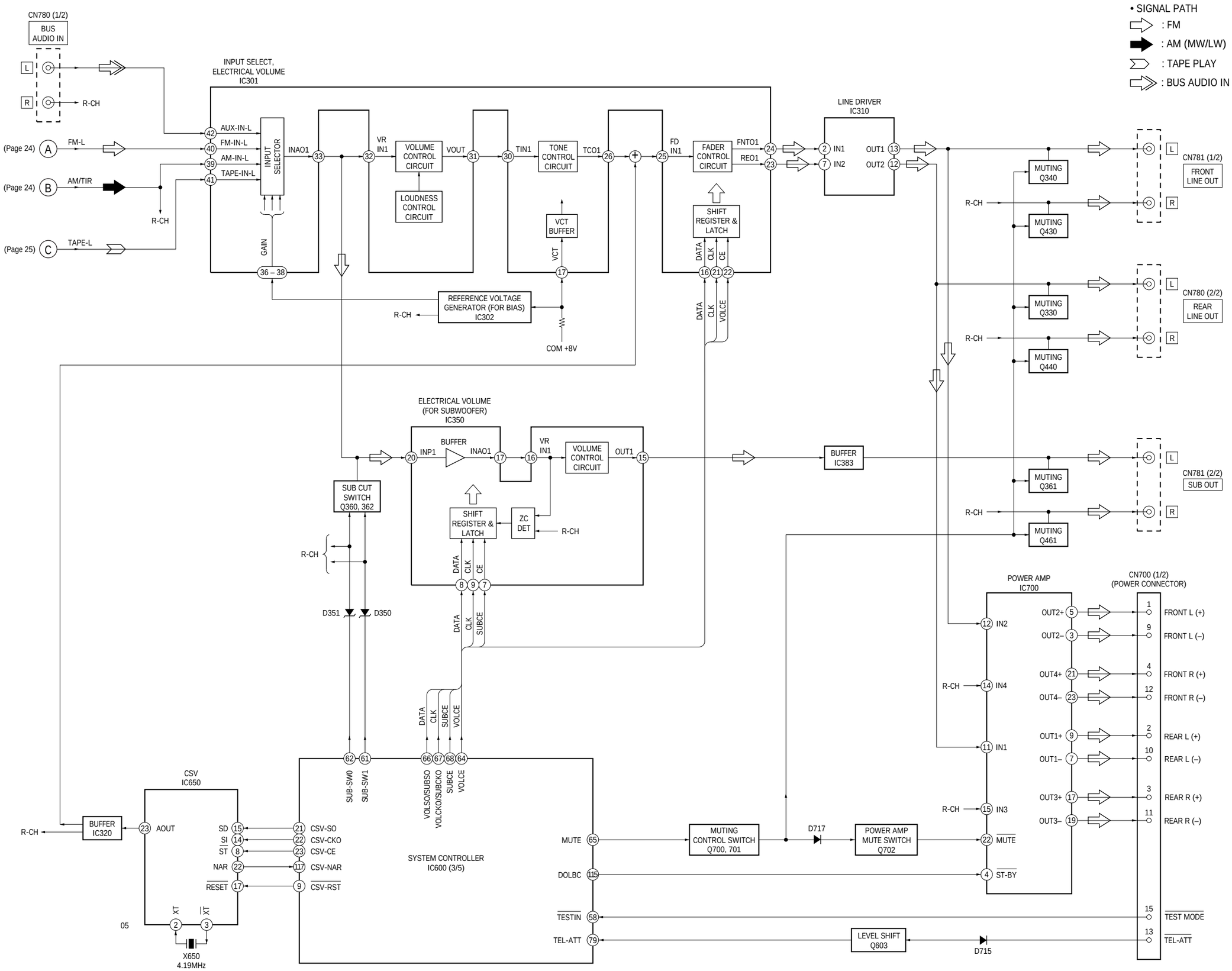
7-1. BLOCK DIAGRAM – TUNER Section –



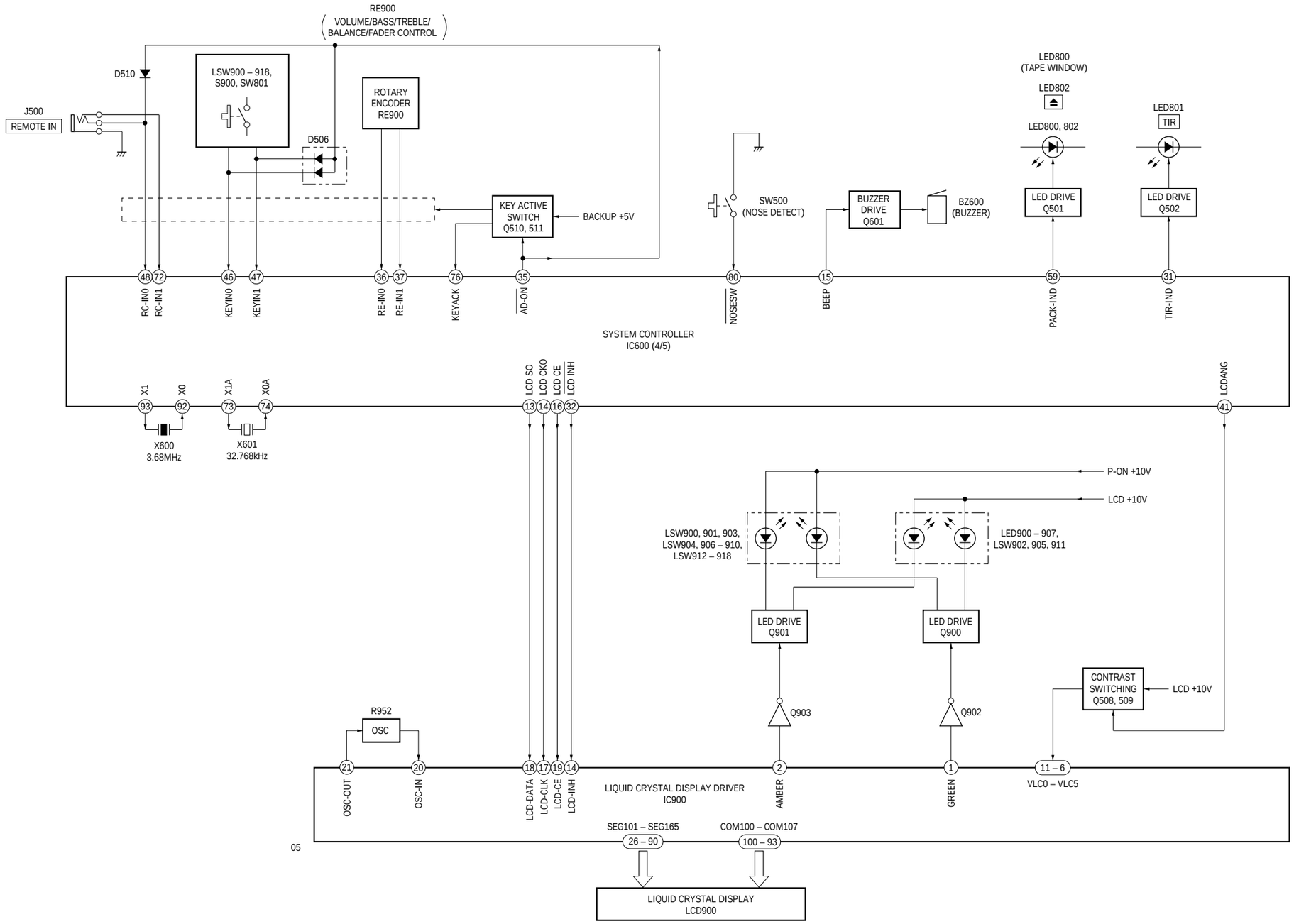
7-2. BLOCK DIAGRAM – TAPE Section –



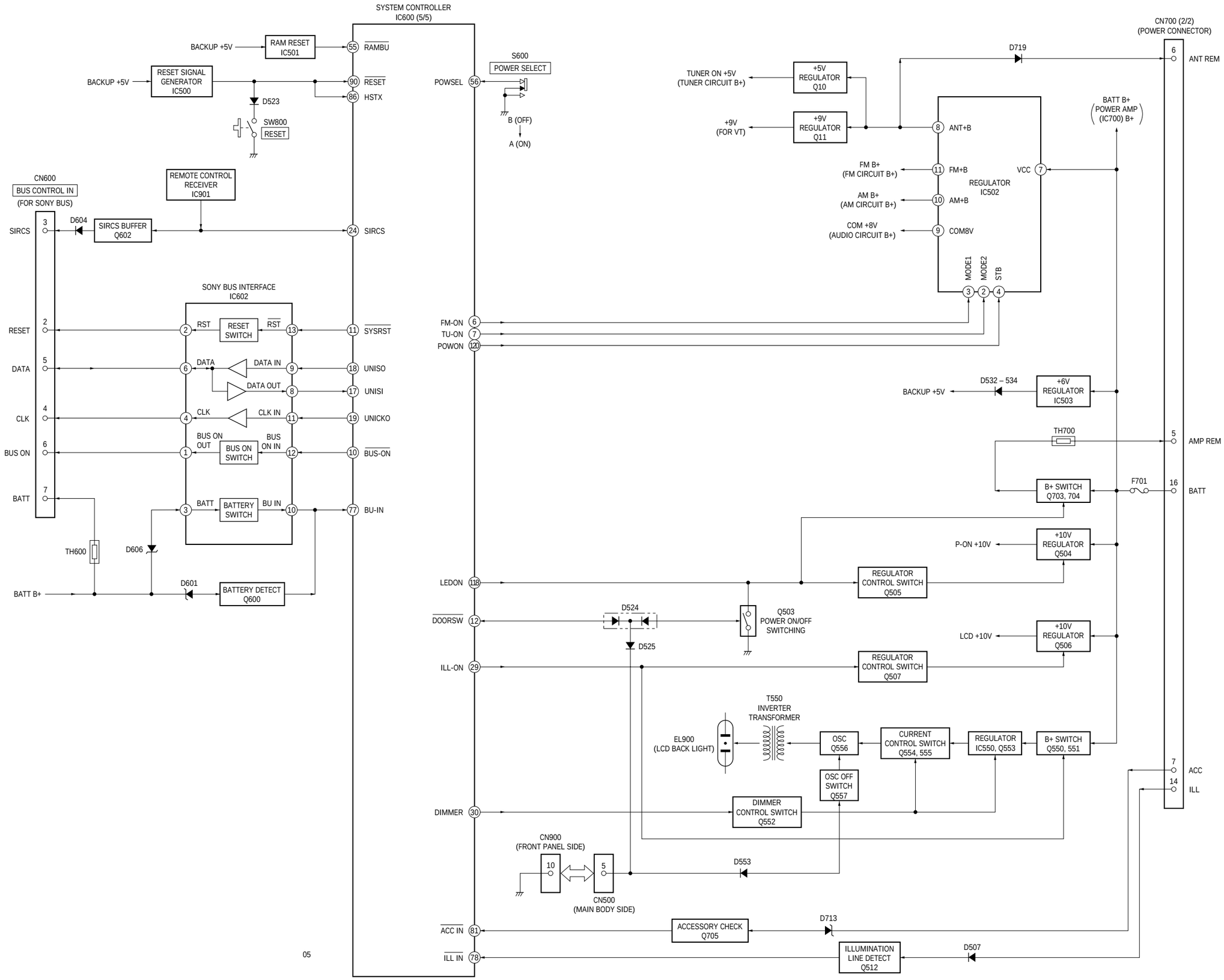
7-3. BLOCK DIAGRAM – MAIN Section –



7-4. BLOCK DIAGRAM – DISPLAY/KEY CONTROL Section –



7-5. BLOCK DIAGRAM – BUS CONTROL/POWER SUPPLY Section –



7-6. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note on Printed Wiring Board:

- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ● : Through hole.
- ▒▒▒ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

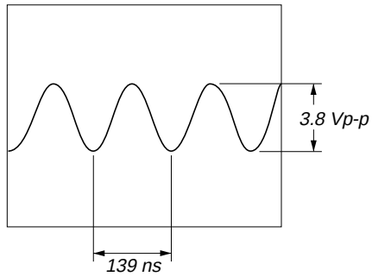
Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.
- B+ : B+ Line.
- ▬ : adjustment for repair.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : AM (MW/LW)
  ⟨⟨ ⟩⟩ : TAPE PLAY
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM
  ➡ : AM (MW/LW)
  ⇨ : BUS AUDIO IN
  Σ : TAPE PLAY
- Abbreviation
  TAPE A : ENGLISH, FRENCH
  TAPE B : ENGLISH, GERMAN
  TAPE C : ENGLISH, SPANISH
  TAPE D : ENGLISH, ITALIAN

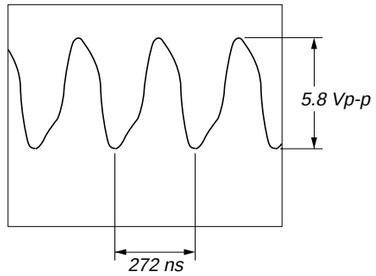
• Waveforms

– MAIN Board –

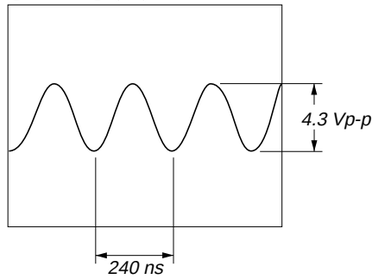
❶ IC10 ⑳ (XOUT)



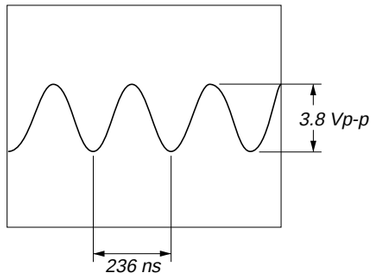
❺ IC600 ㉝ (X1)



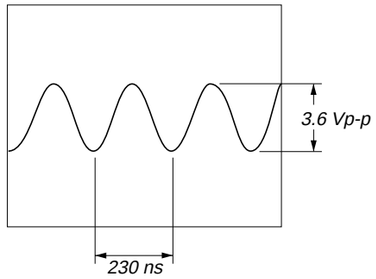
❷ IC100 ㊼ (XT)



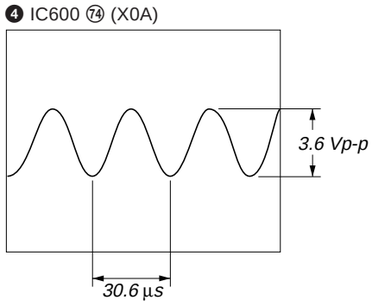
❻ IC650 ② (XT)



❸ IC150 ④ (OSCO)

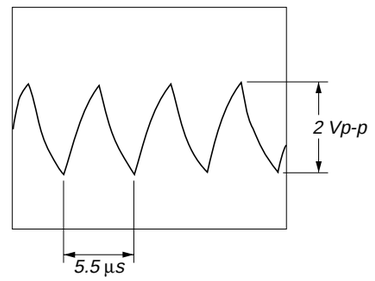


❹ IC600 ㉞ (X0A)

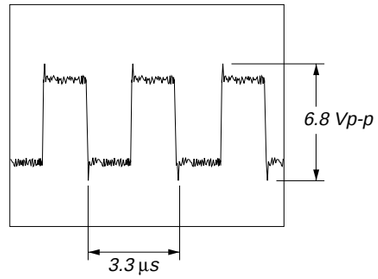


– KEY Board –

❶ IC900 ⑳ (OSC-IN)

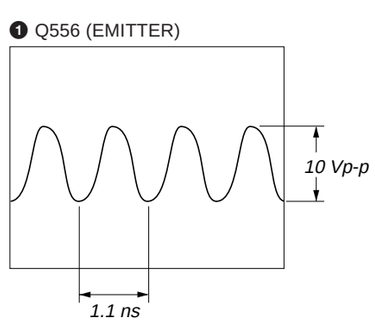


❷ IC900 ㉑ (OSC-OUT)



– INVERTER Board –

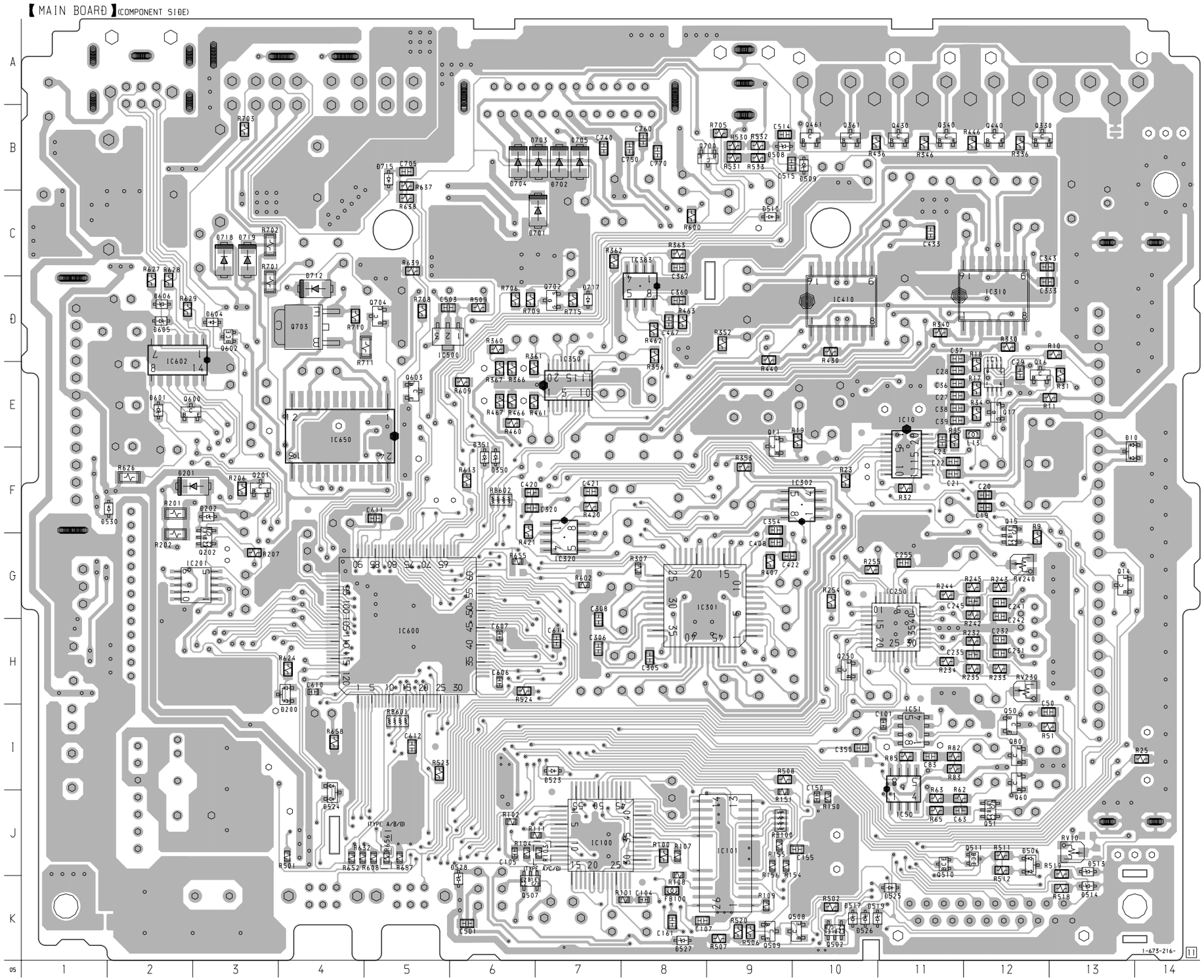
❶ Q556 (EMITTER)



7-7. PRINTED WIRING BOARD – MAIN Board (Component Side) –

- **Semiconductor Location (Component Side)**

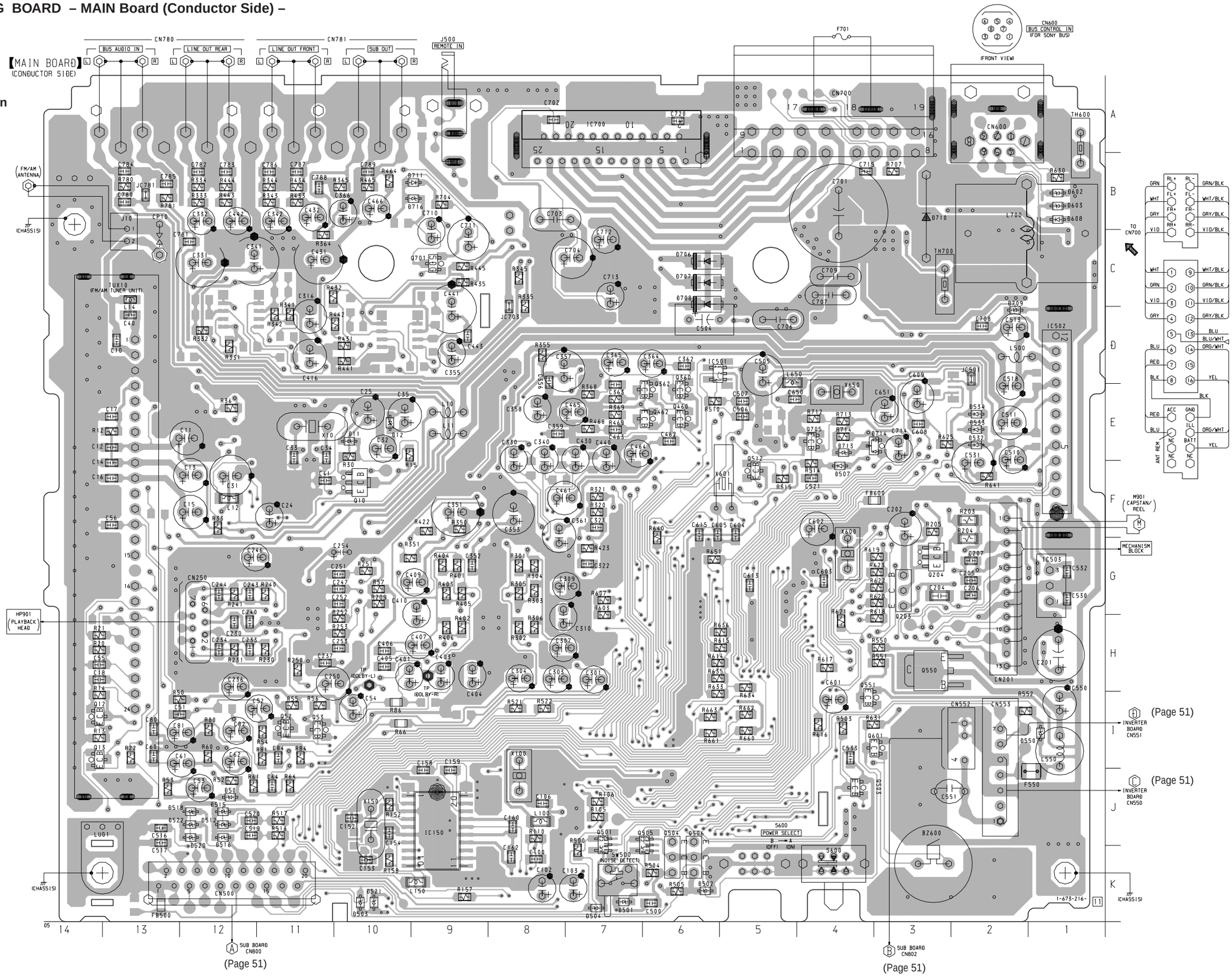
Ref. No.	Location	Ref. No.	Location
D10	F-13	IC301	G-8
D200	H-4	IC302	F-10
D201	F-2	IC310	D-12
D202	F-3	IC320	G-7
D350	F-6	IC350	E-7
D351	F-6	IC383	D-8
D506	J-12	IC410	D-10
D508	B-9	IC500	D-5
D509	B-10	IC600	H-5
D510	C-9	IC602	D-2
D513	J-13	IC650	E-4
D514	K-13		
D517	K-10	Q11	E-9
D519	K-10	Q14	G-13
D523	I-7	Q15	G-12
D524	J-4	Q16	E-12
D525	K-11	Q17	E-12
D526	K-10	Q50	I-12
D527	K-8	Q51	J-12
D528	K-6	Q60	I-12
D530	F-2	Q80	I-12
D601	E-2	Q201	F-3
D604	D-3	Q202	G-3
D605	D-2	Q250	H-10
D606	D-2	Q330	B-12
D701	C-7	Q340	B-11
D702	B-7	Q361	B-10
D703	B-7	Q430	B-11
D704	B-6	Q440	B-12
D705	B-7	Q461	B-10
D712	D-4	Q502	K-10
D715	B-5	Q507	K-6
D717	D-7	Q508	K-10
D718	C-3	Q509	K-9
D719	C-3	Q510	J-11
		Q511	J-12
IC10	F-11	Q600	E-2
IC11	E-12	Q602	D-3
IC50	J-11	Q603	E-5
IC51	I-11	Q700	B-9
IC100	J-7	Q702	D-7
IC101	J-9	Q703	D-4
IC201	G-3	Q704	D-5
IC250	H-11		



7-8. PRINTED WIRING BOARD – MAIN Board (Conductor Side) –

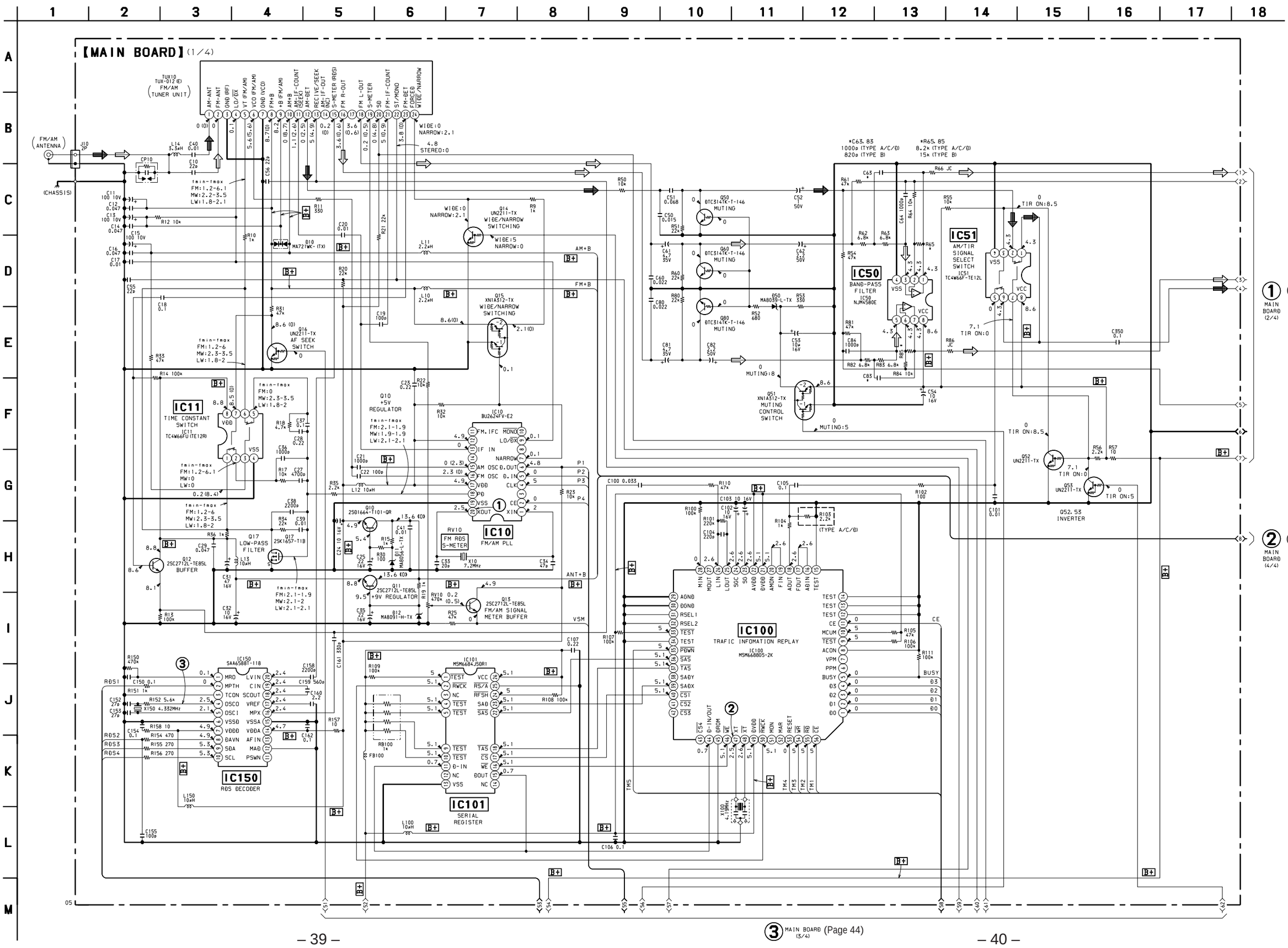
- **Semiconductor Location (Conductor Side)**

Ref. No.	Location
D11	E-10
D12	E-10
D50	J-12
D501	K-7
D502	K-6
D503	K-10
D504	K-7
D507	F-4
D512	J-12
D515	J-12
D516	J-12
D518	J-12
D520	J-12
D521	K-10
D522	J-12
D532	E-2
D533	E-2
D534	E-2
D550	I-1
D602	B-1
D603	B-1
D608	B-1
D706	C-6
D707	C-6
D708	C-6
D709	D-2
D710	B-3
D711	B-9
D713	E-4
D714	E-3
D716	B-9
IC150	J-9
IC501	D-6
IC502	E-1
IC503	G-1
IC700	A-7
Q10	F-10
Q12	I-14
Q13	I-14
Q52	I-11
Q53	I-11
Q203	G-3
Q204	G-3
Q360	E-6
Q362	E-6
Q460	E-6
Q462	E-6
Q501	J-7
Q503	J-4
Q504	K-6
Q505	J-6
Q506	K-6
Q512	F-5
Q550	H-3
Q551	I-4
Q601	I-3
Q701	C-9
Q705	E-4

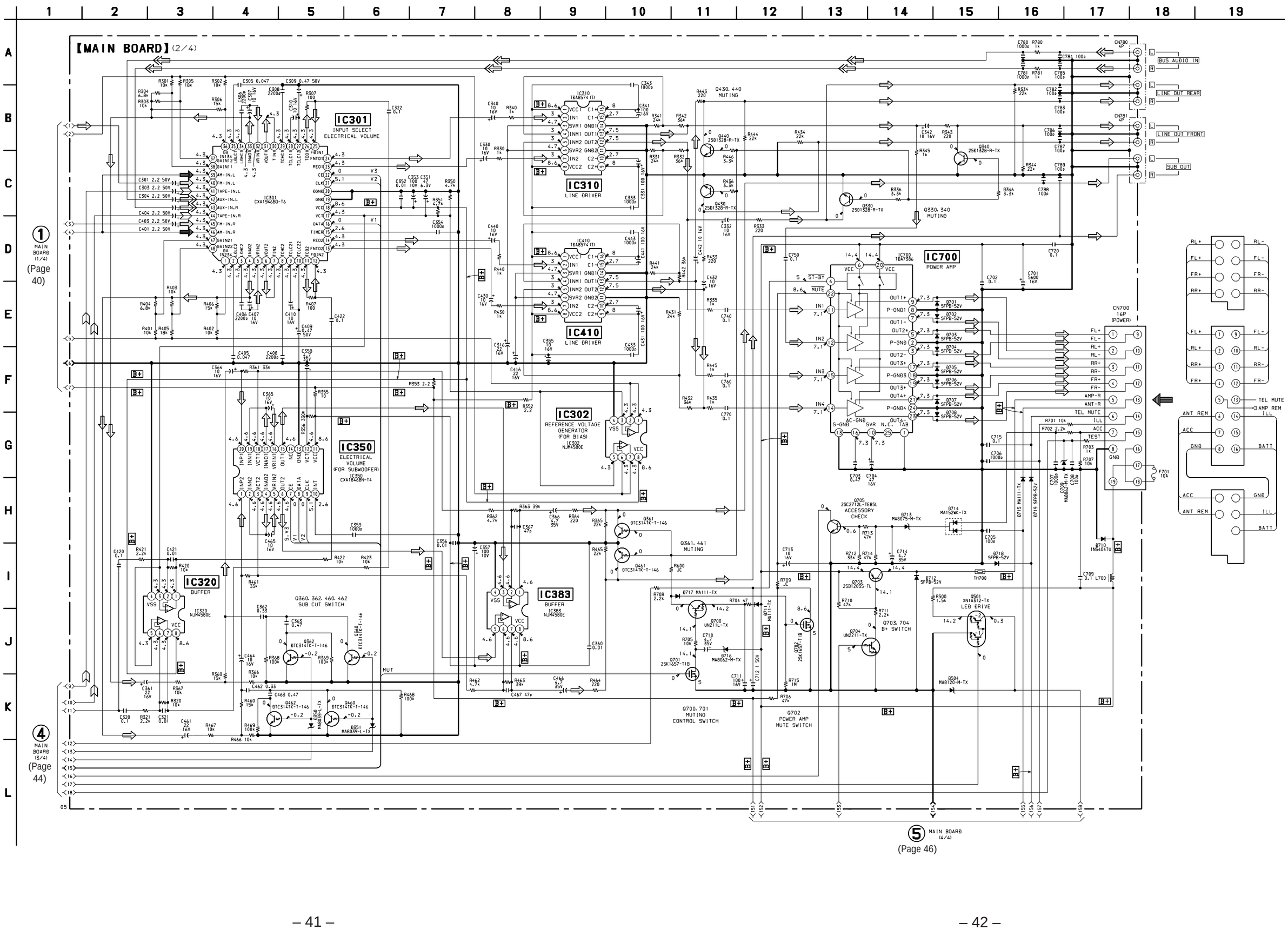


7-9. SCHEMATIC DIAGRAM – MAIN Board (1/4) –

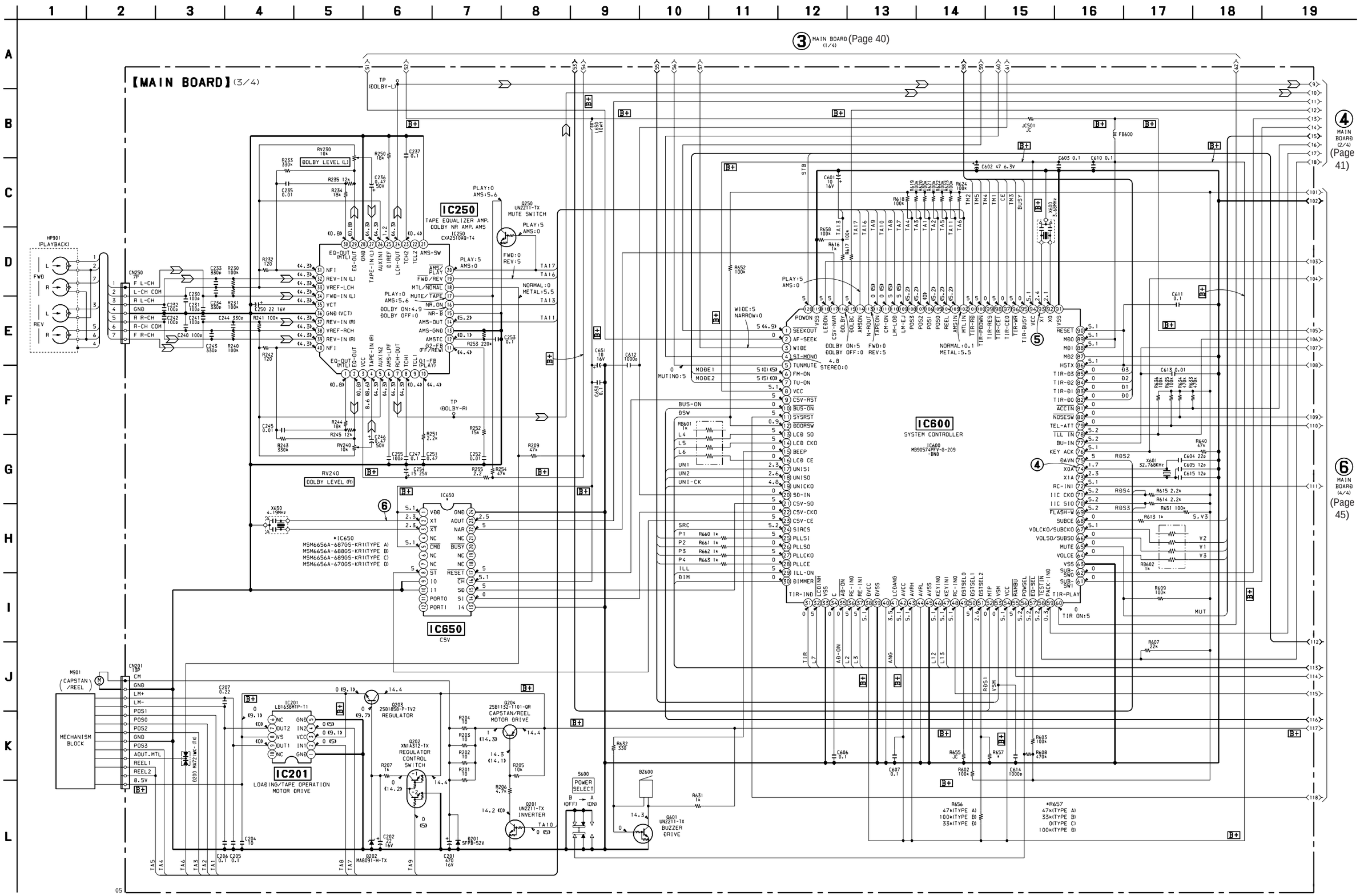
• See page 34 for Waveforms. • See page 53 for IC Block Diagrams.



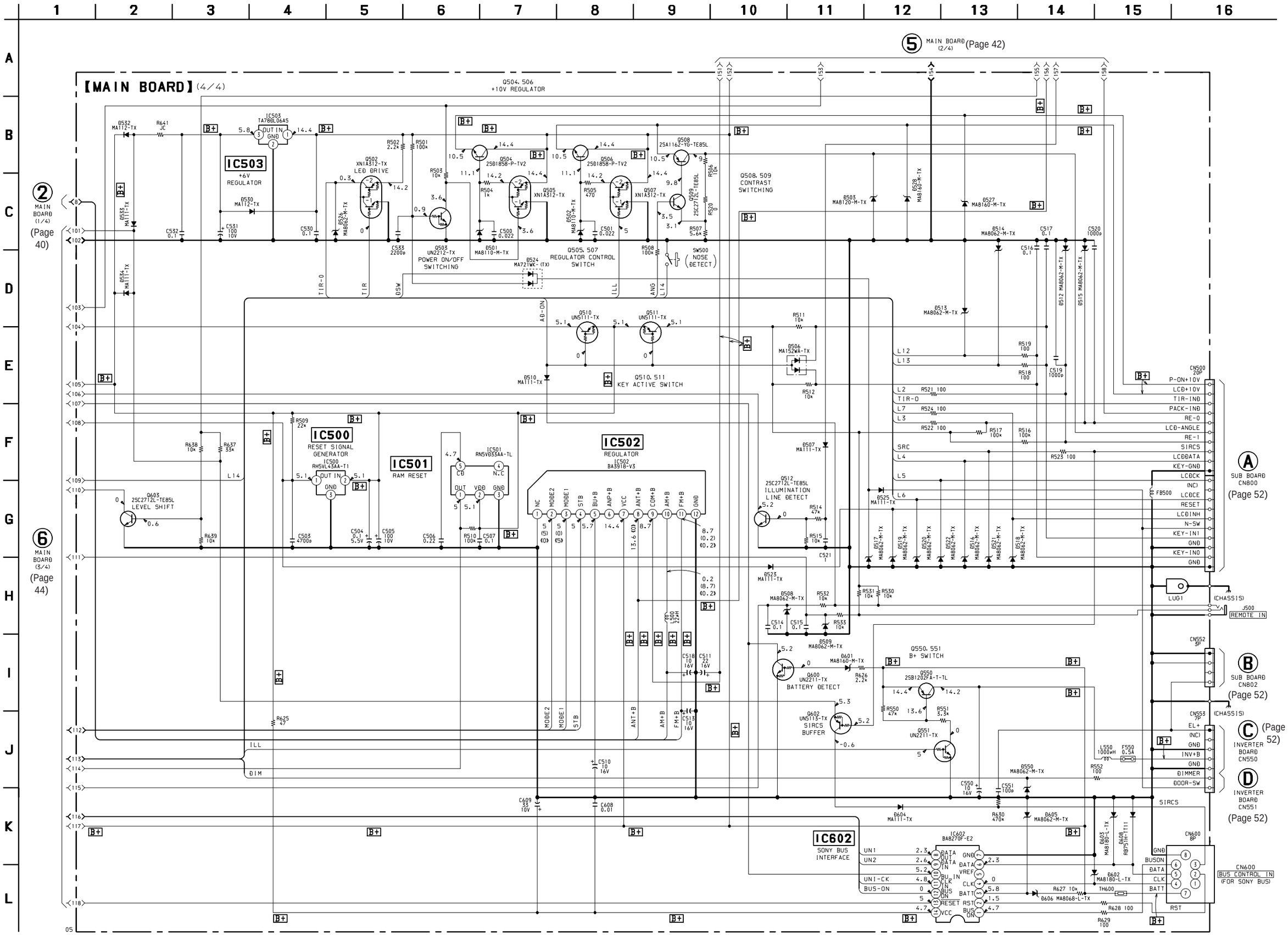
7-10. SCHEMATIC DIAGRAM – MAIN Board (2/4) – • See page 55 for IC Block Diagrams.



7-11. SCHEMATIC DIAGRAM – MAIN Board (3/4) – • See page 34 for Waveforms. • See page 54 for IC Block Diagrams.



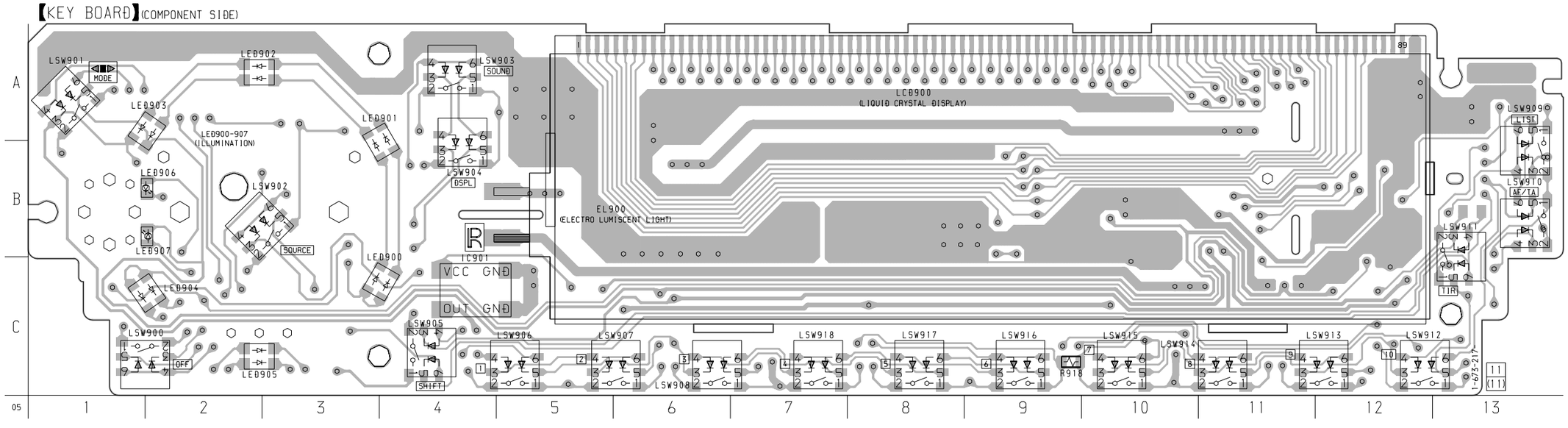
7-12. SCHEMATIC DIAGRAM – MAIN Board (4/4) – • See page 56 for IC Block Diagrams.



7-13. PRINTED WIRING BOARD – KEY Board –

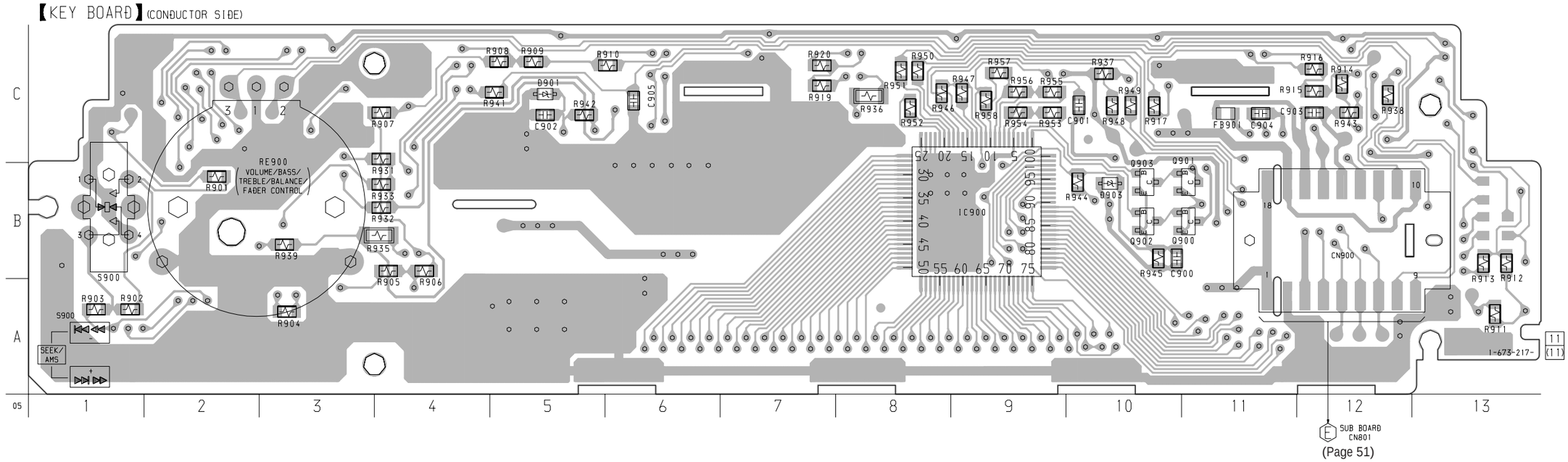
- **Semiconductor Location (Component Side)**

Ref. No.	Location
IC901	C-4
LED900	C-4
LED901	A-4
LED902	A-2
LED903	A-2
LED904	C-2
LED905	C-2
LED906	B-2
LED907	B-2

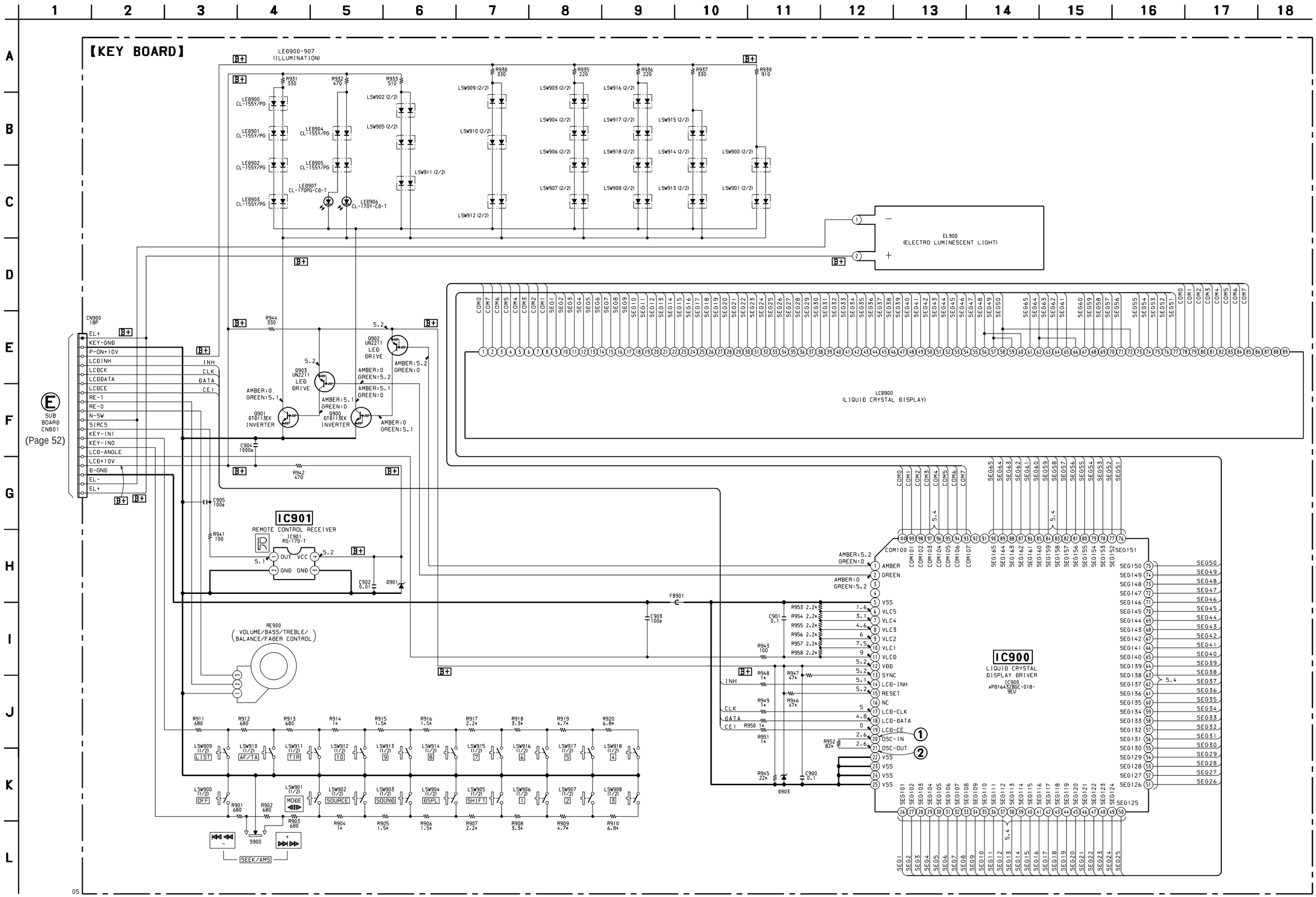


- **Semiconductor Location (Conductor Side)**

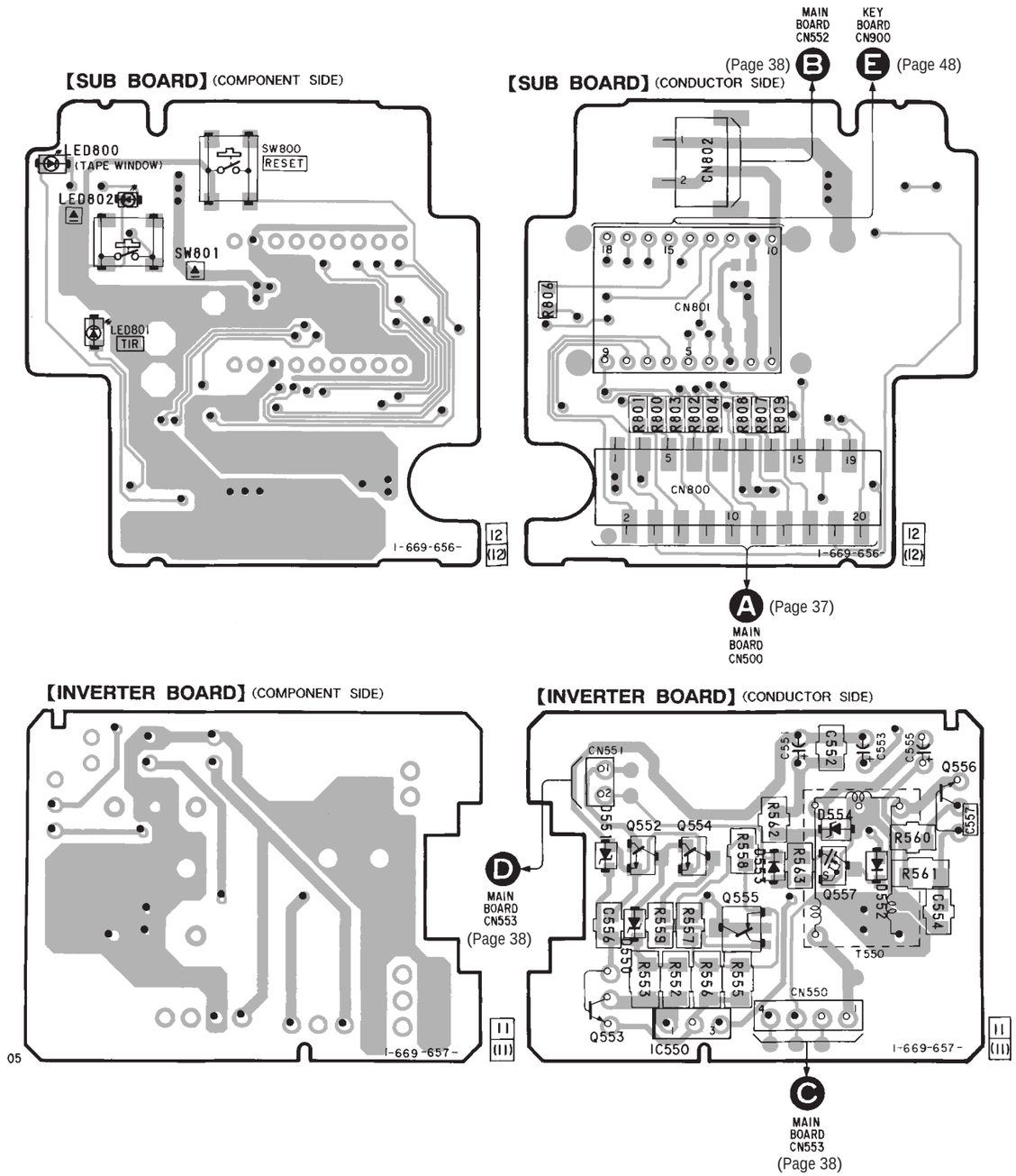
Ref. No.	Location
D901	C-5
D903	B-10
IC900	B-9
Q900	B-11
Q901	B-11
Q902	B-10
Q903	B-10



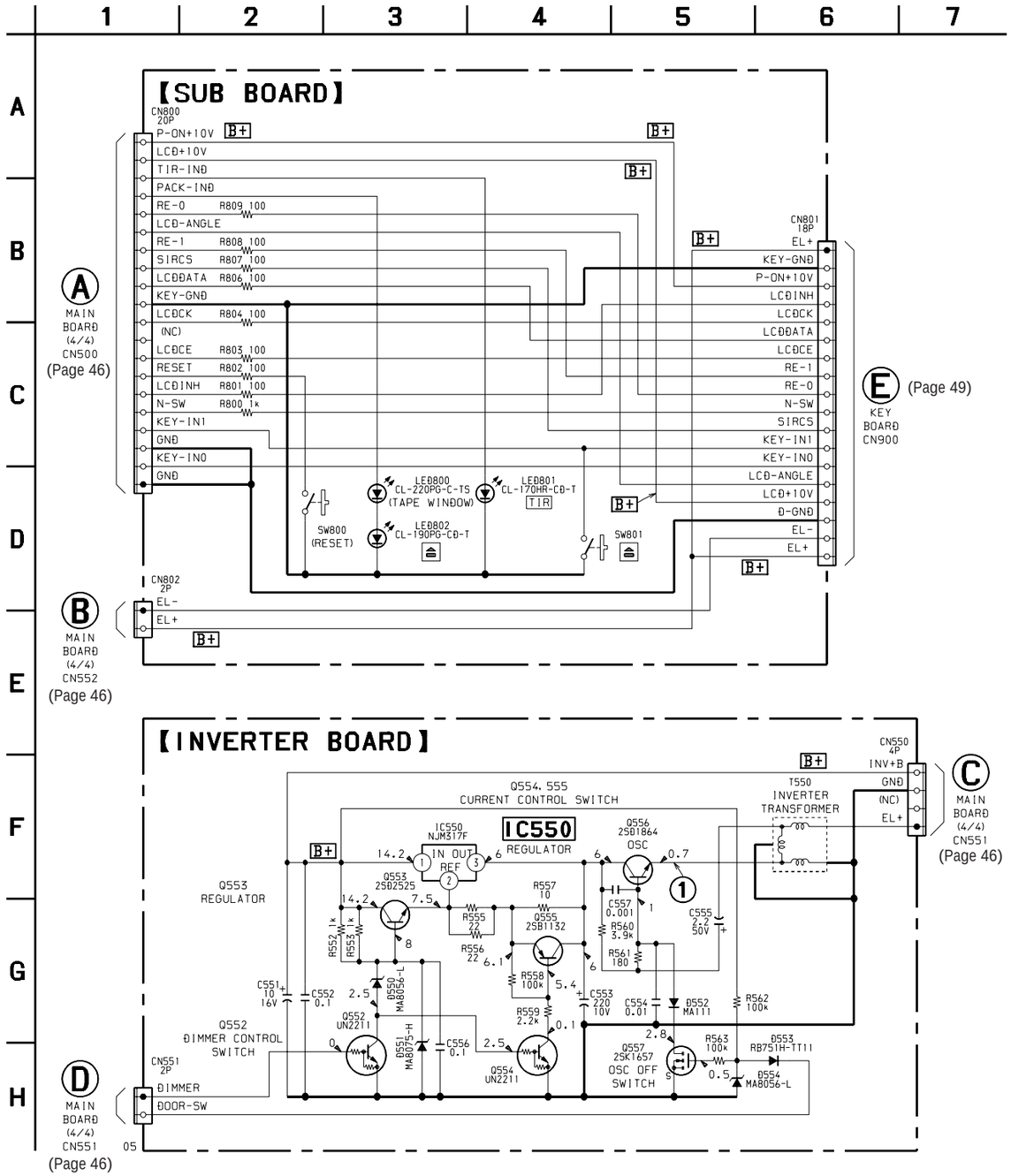
7-14. SCHEMATIC DIAGRAM – KEY Board – • See page 34 for Waveforms.



7-15. PRINTED WIRING BOARDS – SUB/INVERTER Boards –

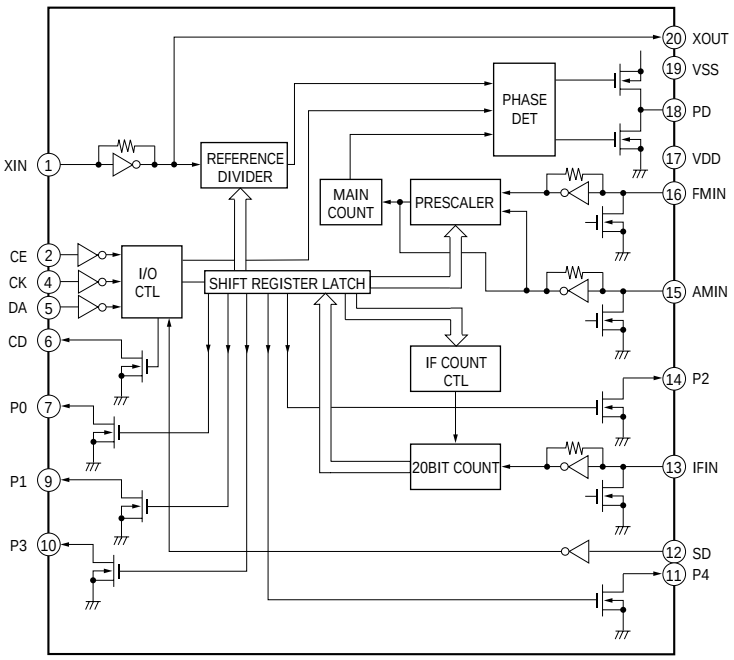


7-16. SCHEMATIC DIAGRAM – SUB/INVERTER Boards – • See page 34 for Waveform.

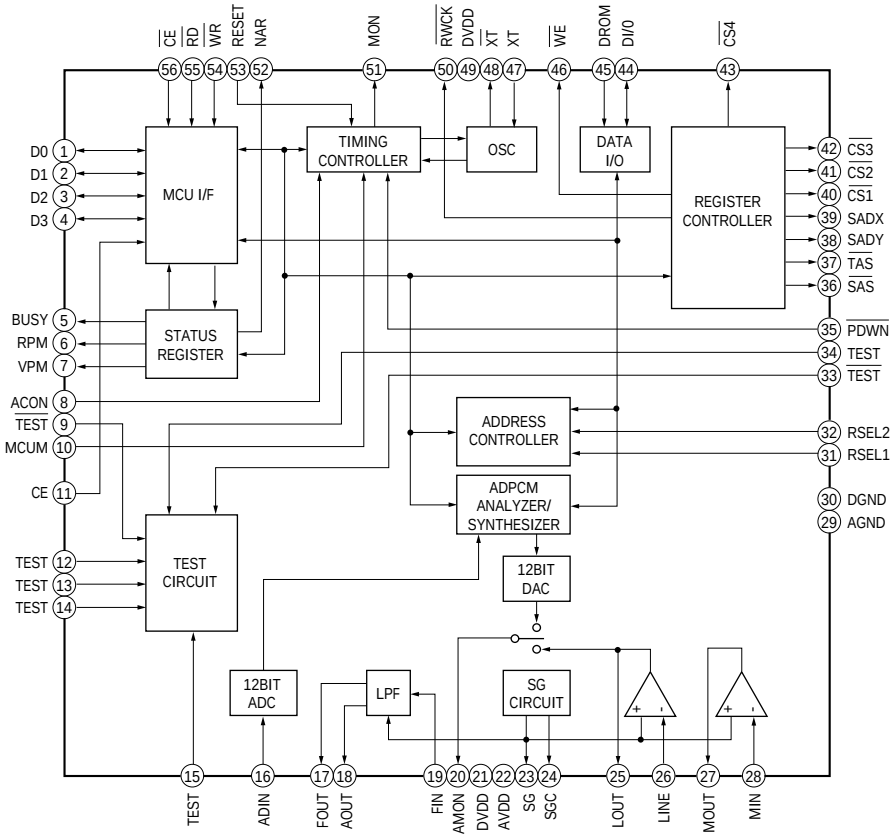


• IC Block Diagrams
– MAIN Board –

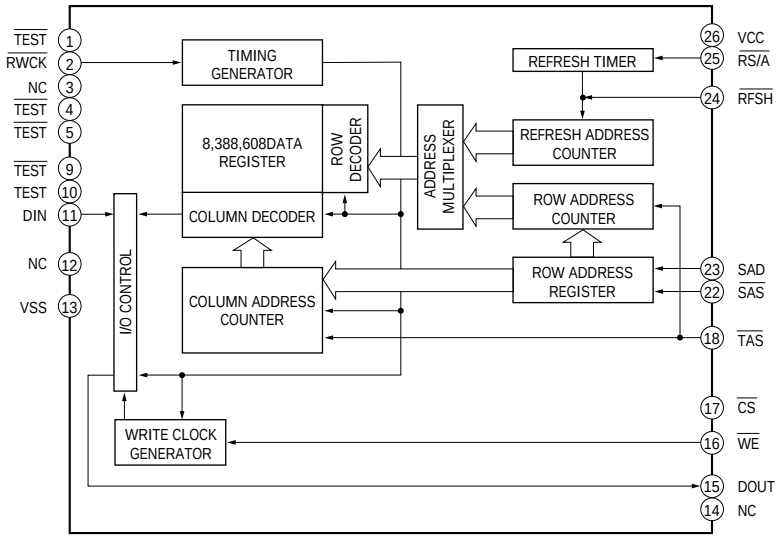
IC10 BU2624FV-E2



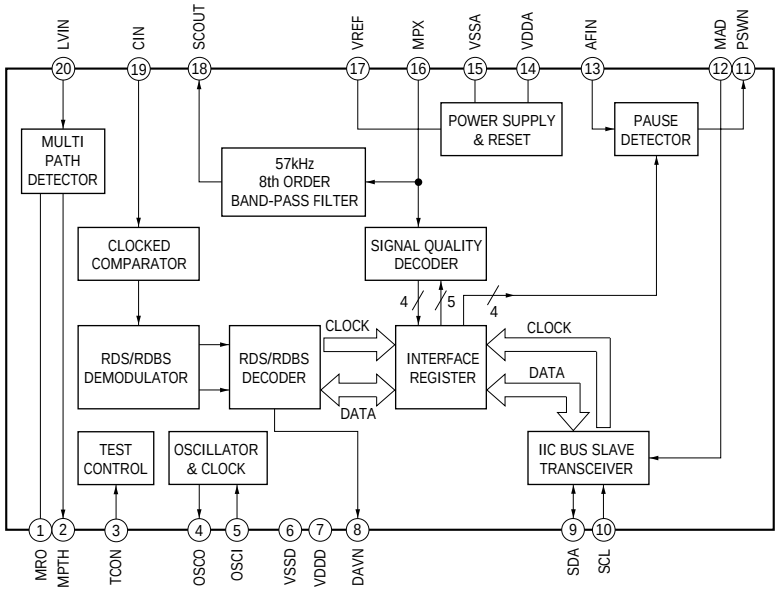
IC100 MSM6688GS-2K



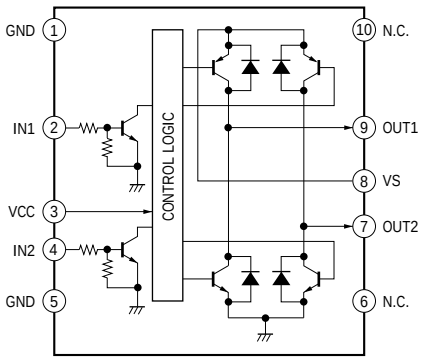
IC101 MSM6684JSDR1



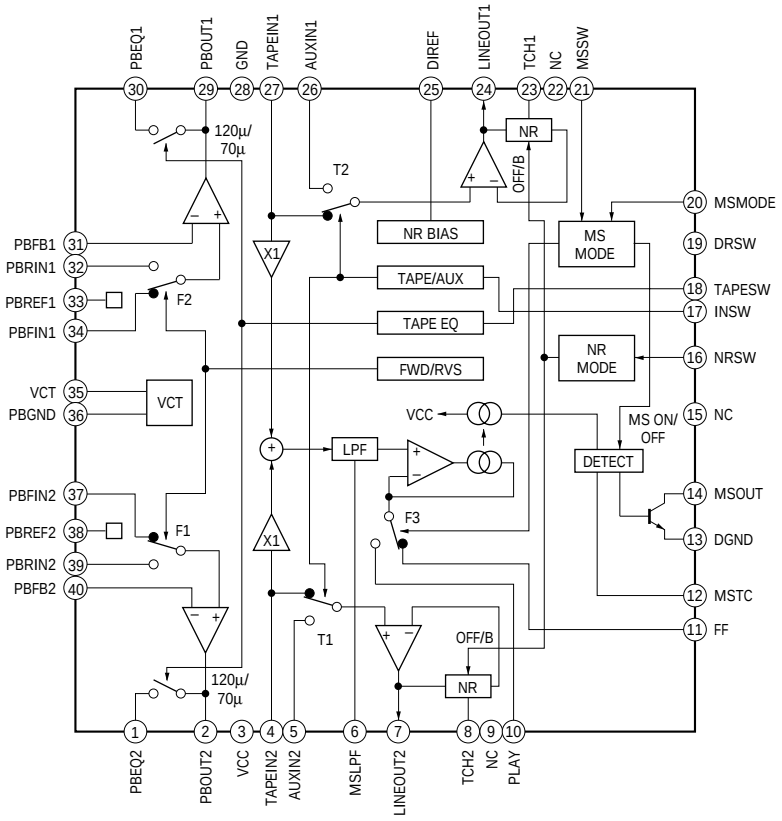
IC150 SAA6588T-118



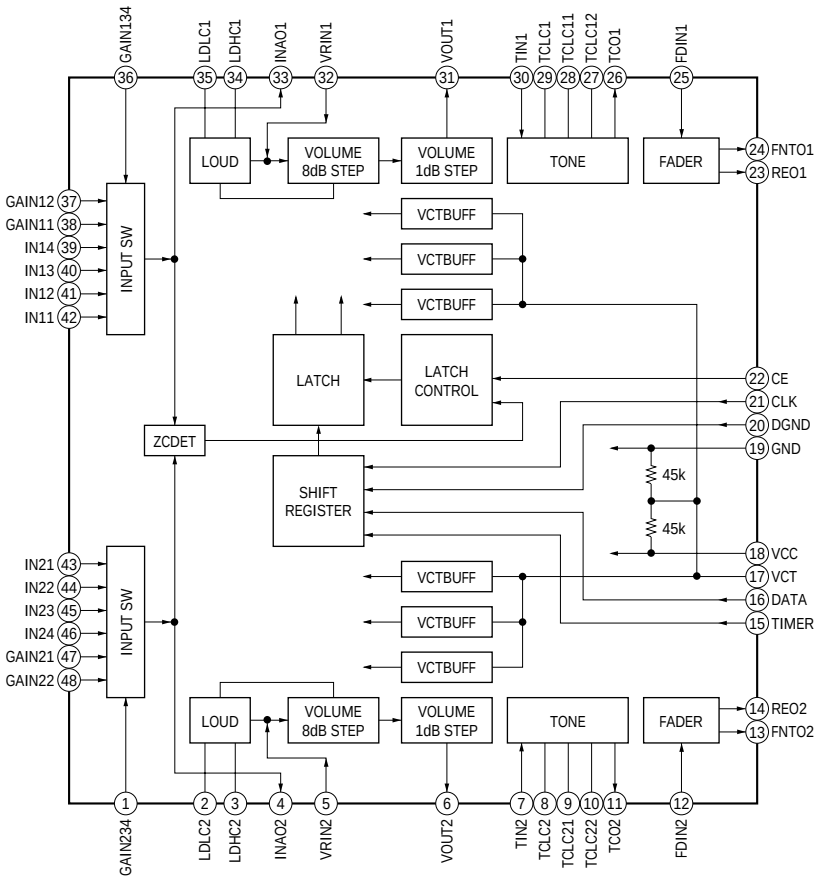
IC201 LB1638M



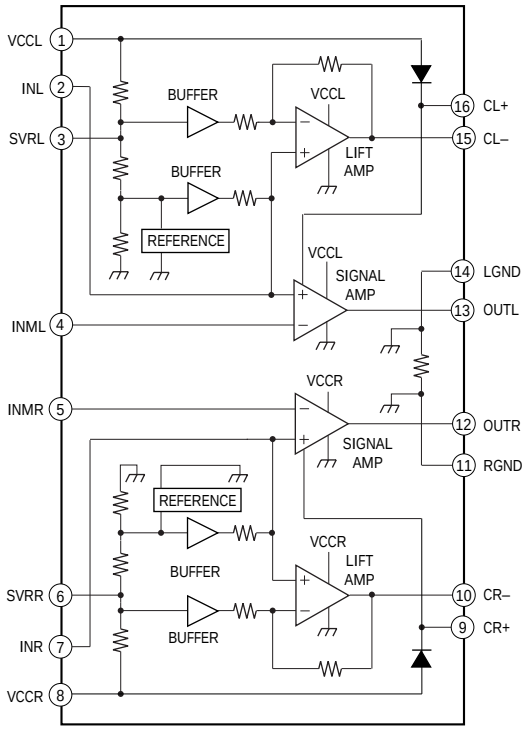
IC250 CXA2510AQ-T4



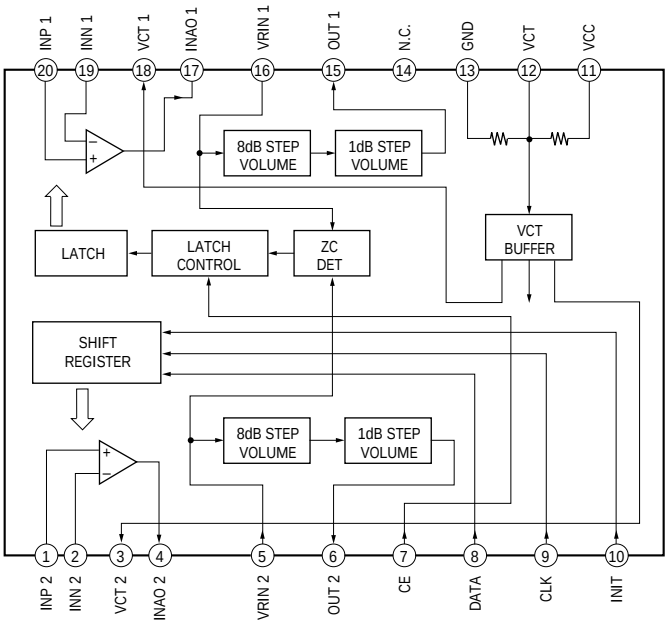
IC301 CXA1946BQ-T6



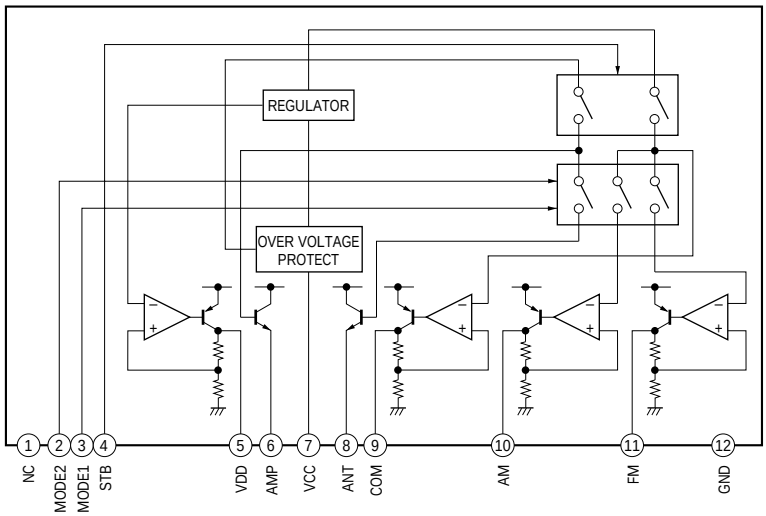
IC310, 410 TDA8574 (T)



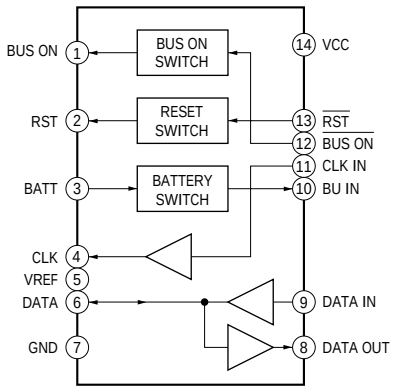
IC350 CXA1846BN-T4



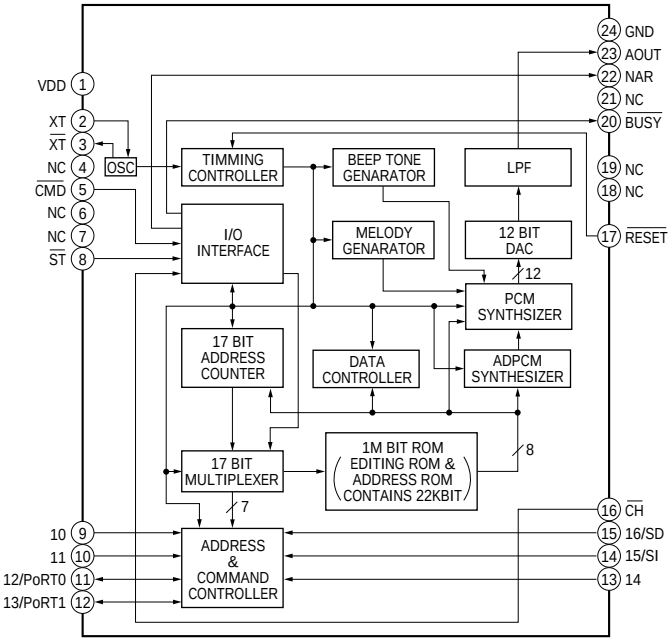
IC502 BA3918-V3



IC602 BA8270F-E2



IC650 MSM6656A-687GS-KR1 (TYPE A)
IC650 MSM6656A-688GS-KR1 (TYPE B)
IC650 MSM6656A-689GS-KR1 (TYPE C)
IC650 MSM6656A-690GS-KR1 (TYPE D)



7-17. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC600 MB90574PFV-G-209-BND (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Function
1	$\overline{\text{SEEKOUT}}$	O	Seek control signal output to the FM/AM tuner unit (TUX10) AM mode: Used for IF count output/SD output request/AGC cut at SEEK or BTM FM mode: Used for SD speed up at SEEK, BTM, or AF "L" is output at tuner off
2	AF-SEEK	O	PLL low-pass filter time constant selection signal output at AF SEEK "H" is output when AF SEEK
3	WIDE	O	IF band select signal output to the FM/AM tuner unit (TUX10) "H": wide mode In receiving FM signals, interference noise from adjacent stations is removed by narrowing the IF band automatically in the tuner unit so as to raise the selectivity, but in this case, the distortion may increase and accordingly, the IF band is widened forcibly
4	ST-MONO	I/O	FM stereo broadcasting detection signal input from the FM/AM tuner unit (TUX10), or forced monaural control signal output to the FM/AM tuner unit (TUX10) "L" is input in the FM stereo mode, or "L" is output in the forced monaural mode
5	TUNMUTE	O	Muting on/off control signal output of the FM and AM tuner signal "H": muting on
6	FM-ON	O	FM system power supply on/off control signal output to the BA3918 (IC502) "L": AM power on, "H": FM power on
7	TU-ON	O	Tuner system power supply on/off control signal output to the BA3918 (IC502) "H": tuner power on
8	VCC	—	Power supply terminal (+5V)
9	$\overline{\text{CSV-RST}}$	O	Reset signal output to the CSV (IC650) "L": reset
10	$\overline{\text{BUS-ON}}$	O	Bus on/off control signal output to the SONY bus interface (IC602) "L": bus on
11	$\overline{\text{SYSRST}}$	O	Reset signal output to the SONY bus interface (IC602) "L": reset
12	$\overline{\text{DOORSW}}$	I	Front panel open/close detection signal input "L" is input when the front panel is closed
13	LCD SO	O	Serial data output to the liquid crystal display driver (IC900)
14	LCD CKO	O	Serial data transfer clock signal output to the liquid crystal display driver (IC900)
15	BEEP	O	Beep sound drive signal output terminal
16	LCD CE	O	Chip enable signal output to the liquid crystal display driver (IC900) "H" active
17	UNISI	I	Serial data input from the SONY bus interface (IC602)
18	UNISO	O	Serial data output to the SONY bus interface (IC602)
19	UNICKO	O	Serial data transfer clock signal output to the SONY bus interface (IC602)
20	SD-IN	I	Station detector detect input from the FM/AM tuner unit (TUX10) Stop level for SEEK, BTM, etc. is determined SD is present at input of "H"
21	CSV-SO	O	Serial data output to the CSV (IC650)
22	CSV-CKO	O	Serial data transfer clock signal output to the CSV (IC650)
23	CSV-CE	O	Chip enable signal output to the CSV (IC650) "L" active
24	SIRCS	I	Sircs remote control signal input from the remote control receiver (IC901)
25	PLLSI	I	PLL serial data input from the FM/AM PLL (IC10)
26	PLLSO	O	PLL serial data output to the FM/AM PLL (IC10)
27	PLLCKO	O	PLL serial data transfer clock signal output to the FM/AM PLL (IC10)
28	PLLCE	O	PLL chip enable signal output to the FM/AM PLL (IC10) "H" active
29	ILL-ON	O	Power on/off control signal output of the illumination LED and liquid crystal display driver (IC900) "H": power on Depends on initial setting of power select switch (S600) Power select switch (S600) on: "H" output at the accessory on Power select switch (S600) off: "H" output at the power on
30	DIMMER	I/O	Dimmer control in/out terminal At initial mode: The presence of dimmer select function is set (if this status, if "L" is input, the dimmer select function is present) At normal mode: LCD back light brightness control signal output
31	TIR-IND	O	LED drive signal output of the TIR indicator (LED801) "H": LED on

Pin No.	Pin Name	I/O	Function
32	$\overline{\text{LCD INH}}$	O	Blank indicate control signal output to the liquid crystal display driver (IC900) "L": no display
33	VSS	—	Ground terminal
34	C	—	Connected to coupling capacitor for the power supply
35	$\overline{\text{AD-ON}}$	O	A/D converter power control signal output terminal When the KEYACK (pin ⑯) that controls reference voltage power for key A/D conversion input is active, "L" is output from this terminal to enable the input
36	RE-IN0	I	Dial pulse input of the rotary encoder (RE900) (for VOLUME/BASS/TREBLE/BALANCE/FADER control)
37	RE-IN1	I	
38	DVCC	—	Power supply terminal (+5V) (for D/A converter)
39	DVSS	—	Ground terminal (for D/A converter)
40	—	I	Not used (fixed at "L")
41	LCDANG	O	View field angle control signal is output when front panel is fully opened "H": front panel is fully opened
42	AVCC	—	Power supply terminal (+5V) (for A/D converter)
43	AVRH	I	Reference voltage (+5V) input terminal (for A/D converter)
44	AVRL	I	Reference voltage (0V) input terminal (for A/D converter)
45	AVSS	—	Ground terminal (for A/D converter)
46	KEYIN0	I	Key input terminal (A/D input) (LSW900, S900, LSW901 to LSW908) OFF, SEEK/AMS + ▶▶| |◀◀ ▶▶ |◀◀ ◀◀ – , MODE ◀II▶, SOURCE, SOUND, DSPL, SHIFT, 1, 2, 3 keys input
47	KEYIN1	I	Key input terminal (A/D input) (SW801, LSW909 to LSW918) ⏏, LIST, AF/TA, PTY LIST, 10, 9, 8, 7, 6, 5, 4 keys input
48	RC-IN0	I	Rotary remote commander key input terminal (A/D input)
49	DSTSEL0	I	Destination setting terminal (fixed at "L")
50	DSTSEL1	I	Destination setting terminal (fixed at "H")
51	DSTSEL2	I	Destination setting terminal (Type 1: fixed at "L", Type 2: fixed at 1/4 voltage, Type 3: fixed at 1/2 voltage, Type 4: fixed at 3/4 voltage)
52	MTP	I	Multi-path detection signal input from the RDS decoder (IC150)
53	VSM	I	FM and AM signal meter voltage detection input from the FM/AM tuner unit (TUX10) (A/D input)
54	VCC	—	Power supply terminal (+5V)
55	$\overline{\text{RAMBU}}$	I	Internal RAM reset detection signal input from the RN5VD33AA (IC501) Input terminal to check that RAM data are not destroyed due to low voltage This checking is made within 100 msec after reset
56	POWSEL	I	Power select switch (S600) input terminal "L": off (halt mode), "H": on (operation mode)
57	$\overline{\text{EQ-SEL}}$	I	Not used (fixed at "H")
58	$\overline{\text{TESTIN}}$	I	Setting terminal for the test mode "L": test mode, Normally: fixed at "H"
59	PACK-IND	O	LED drive signal output of the tape window illumination and ⏏ indicators (LED800, 802) "H": LED on "H" is output to turn on LED when front panel is opened
60	TIR-PLAY	O	AM/TIR selection signal output to the TC4W66F (IC51) "L": AM signal, "H": TIR signal
61	SUB-SW1	O	Sub woofer output cut-off frequency select signal output terminal
62	SUB-SW0	O	Sub woofer output cut-off frequency select signal output terminal
63	VSS	—	Ground terminal
64	VOLCE	O	Chip enable signal output to the main electrical volume (IC301) "H": active
65	MUTE	O	Audio line muting on/off control signal output terminal "H": muting on
66	VOLSO/ SUBSO	O	Serial data output to the main electrical volume (IC301) and sub electrical volume (IC350)
67	VOLCKO/ SUBCKO	O	Serial data transfer clock signal output to the main electrical volume (IC301) and sub electrical volume (IC350)
68	SUBCE	O	Chip enable signal output to the sub electrical volume (IC350) "H" active

Pin No.	Pin Name	I/O	Function
69	$\overline{\text{FLASH-W}}$	I	Internal flash memory data write mode detection signal input terminal "L": data write mode Not used (fixed at "H" in this set)
70	IIC SIO	I/O	Two-way data bus with the RDS decoder (IC150)
71	IIC CKO	O	Bus clock signal output to the RDS decoder (IC150)
72	RC-IN1	I	Rotary remote commander shift key input terminal "L": shift
73	X1A	O	Sub system clock output terminal (32.768 kHz)
74	X0A	I	Sub system clock input terminal (32.768 kHz)
75	DAVN	I	Data transmit completed detect signal input from the RDS decoder (IC150) "H" active
76	KEYACK	I	Input of acknowledge signal for the key entry Acknowledge signal is input to accept function and eject keys in the power off status On at input of "H"
77	BU-IN	I	Battery detect signal input from the SONY bus interface (IC602) and battery detect circuit "L" is input at low voltage
78	$\overline{\text{ILL IN}}$	I	Auto dimmer control illumination line detection signal input terminal "L" is input at dimmer detection
79	TEL-ATT	I	Telephone muting signal input terminal At input of "H", the signal is attenuated by –20 dB
80	$\overline{\text{NOSESW}}$	I	Front panel block remove/attach detection switch (SW500) input terminal "L": front panel is attached
81	$\overline{\text{ACC IN}}$	I	Accessory detect signal input terminal "L": accessory on
82 to 85	TIR-D0 to TIR-D3	I/O	Two-way data bus with the MSM6688GS (IC100)
86	HSTX	I	Hardware standby input terminal "L": hardware standby mode Reset signal input in this set
87	MD2	I	Setting terminal for the CPU operational mode (fixed at "L" in this set)
88	MD1	I	Setting terminal for the CPU operational mode (fixed at "H" in this set)
89	MD0	I	Setting terminal for the CPU operational mode (fixed at "H" in this set)
90	$\overline{\text{RESET}}$	I	System reset signal input from the reset signal generator (IC500) and reset switch (SW800) "L": reset "L" is input for several 100 msec after power on, then it changes to "H"
91	VSS	—	Ground terminal
92	X0	I	Main system clock input terminal (3.68 MHz)
93	X1	O	Main system clock output terminal (3.68 MHz)
94	VCC	—	Power supply terminal (+5V)
95	TIR-BUSY	I	Busy detection signal input from the MSM6688GS (IC100) "H" is output while MSM6688GS (IC100) is executing a command
96	$\overline{\text{TIR-WR}}$	O	Data write strobe signal output to the MSM6688GS (IC100) "L" is output when data (D0 to D3) are output to the MSM6688GS (IC100)
97	TIR-CE0	O	Chip enable signal output to the MSM6688GS (IC100) TIR-WR (pin ⑨⑥) or TIR-RD (pin ⑩①) is accepted when CE is "L" or $\overline{\text{CE}}$ is "H" respectively TIR-WR (pin ⑨⑥) or TIR-RD (pin ⑩①) is not accepted when CE is "H" or CE is "L" respectively
98	$\overline{\text{TIR-CE1}}$	O	
99	TIR-RES	O	Reset signal output to the MSM6688GS (IC100) "H": reset
100	$\overline{\text{TIR-PDOWN}}$	O	Power down control signal output to the MSM6688GS (IC100) "L": power down
101	$\overline{\text{TIR-RD}}$	O	Data read strobe signal output to the MSM6688GS (IC100) "L" is output when data (D0 to D3) are output to the MSM6688GS (IC100)
102	MTLIN	I	Metal detection signal input terminal "L": normal position, "H": metal position
103	AMSIN	I	Whether a music is present or not from CXA2510AQ (IC250) is detected at auto music sensor "L": music is present, "H": music is not present
104	REEL	I	Rotation detect signal input from supply reel sensor and take-up reel sensor on the deck mechanism
105	POS0	I	Tape position (EJECT/FF/REW/ REV/FWD mode) detect input from the tape operation switch on the deck mechanism POS0: "L": EJECT mode, "H": others mode POS1: "L": FF and FWD mode, "H": others mode POS2: "L": REW mode, "H": others mode POS3: "L": REV and EJECT mode, "H": others mode
106	POS1	I	
107	POS2	I	
108	POS3	I	

Pin No.	Pin Name	I/O	Function
109	LM-EJ	O	Motor drive signal output to the loading/tape operation motor drive (IC201) "H" active (For the eject direction and reverse side operation) *1
110	LM-LOD	O	Motor drive signal output to the loading/tape operation motor drive (IC201) "H" active (For the loading direction and forward side operation) *1
111	CM-ON	O	Capstan/reel motor (M901) drive signal output terminal "H": motor on
112	TAPEON	O	Tape system power supply on/off control signal output terminal "H": tape on
113	N-ROUT	O	Forward/reverse direction control signal output to the CXA2510AQ (IC250) "L": forward direction, "H": reverse direction
114	AMSON	O	Tape auto music sensor control signal output to the CXA2510AQ (IC250) "L" is output to lower the gain for audio level at FF/REW mode
115	DOLBC	O	Standby on/off control signal output to the power amplifier (IC700) "L": standby mode, "H": amp on
116	DOLBY	I/O	Dolby control in/out terminal At initial mode: valid/invalid selection input of dolby function (valid at "L" input) At normal mode: dolby on/off control signal output to the CXA2510AQ (IC250) (dolby on at "H" output)
117	CSV-NAR	I	"H" is input when CSV (IC650) sends data
118	LEDON	O	Power supply on/off control signal output of the illumination LED "H": power on
119	VSS	—	Ground terminal
120	POWON	O	Main system power supply on/off control signal output to the BA3918 (IC502) "H": power on

*1 Loading/tape operation motor control

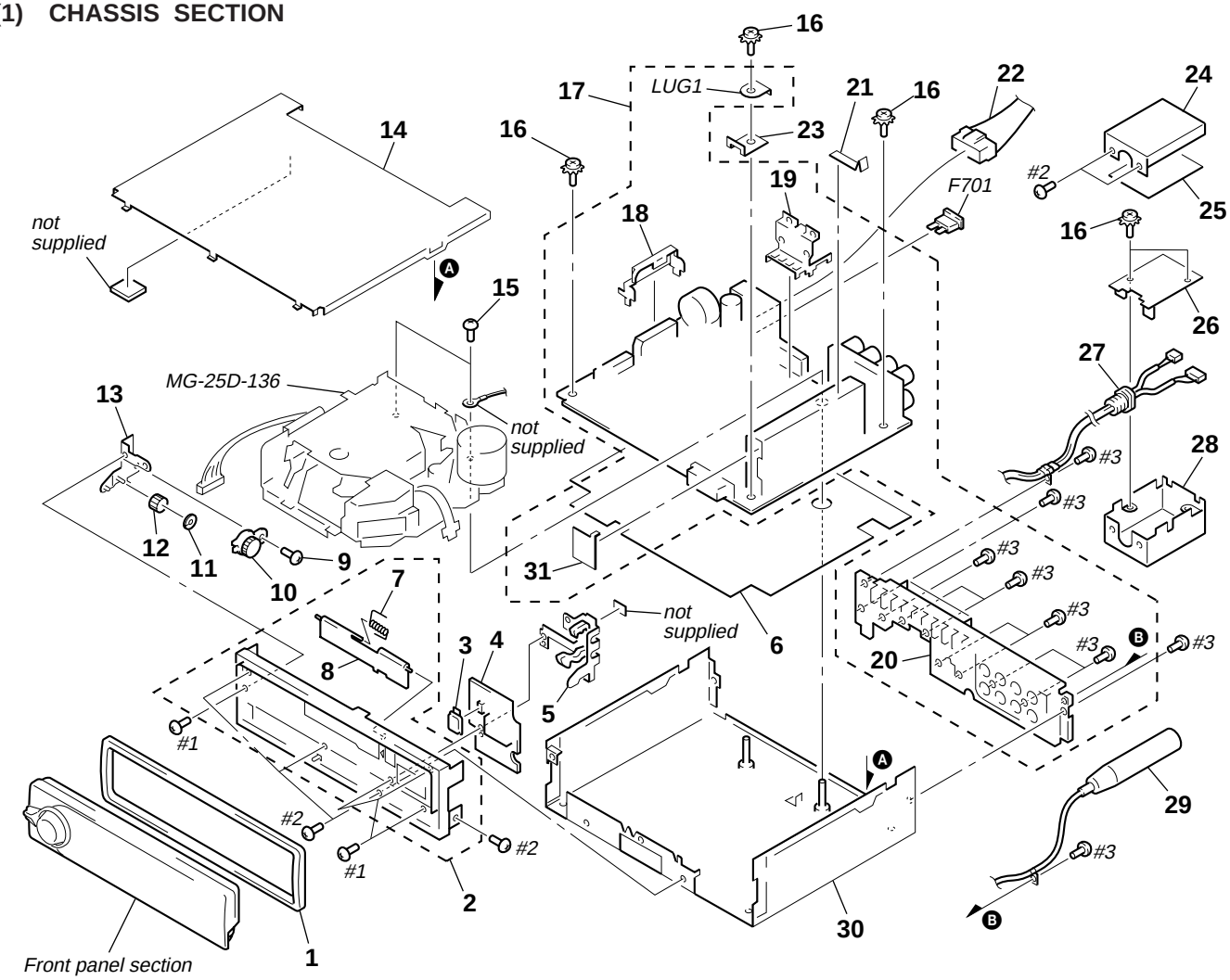
Mode / Terminal	STOP	LOADING/ FORWARD	EJECT/ REVERSE	BRAKE
LM-LOD (pin ⑪⓪)	"L"	"H"	"L"	"H"
LM-EJ (pin ⑩⑨)	"L"	"L"	"H"	"H"

SECTION 8
EXPLODED VIEWS

NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.
- Abbreviation
  TYPE A : ENGLISH, FRENCH
  TYPE B : ENGLISH, GERMAN
  TYPE C : ENGLISH, SPANISH
  TYPE D : ENGLISH, ITALIAN

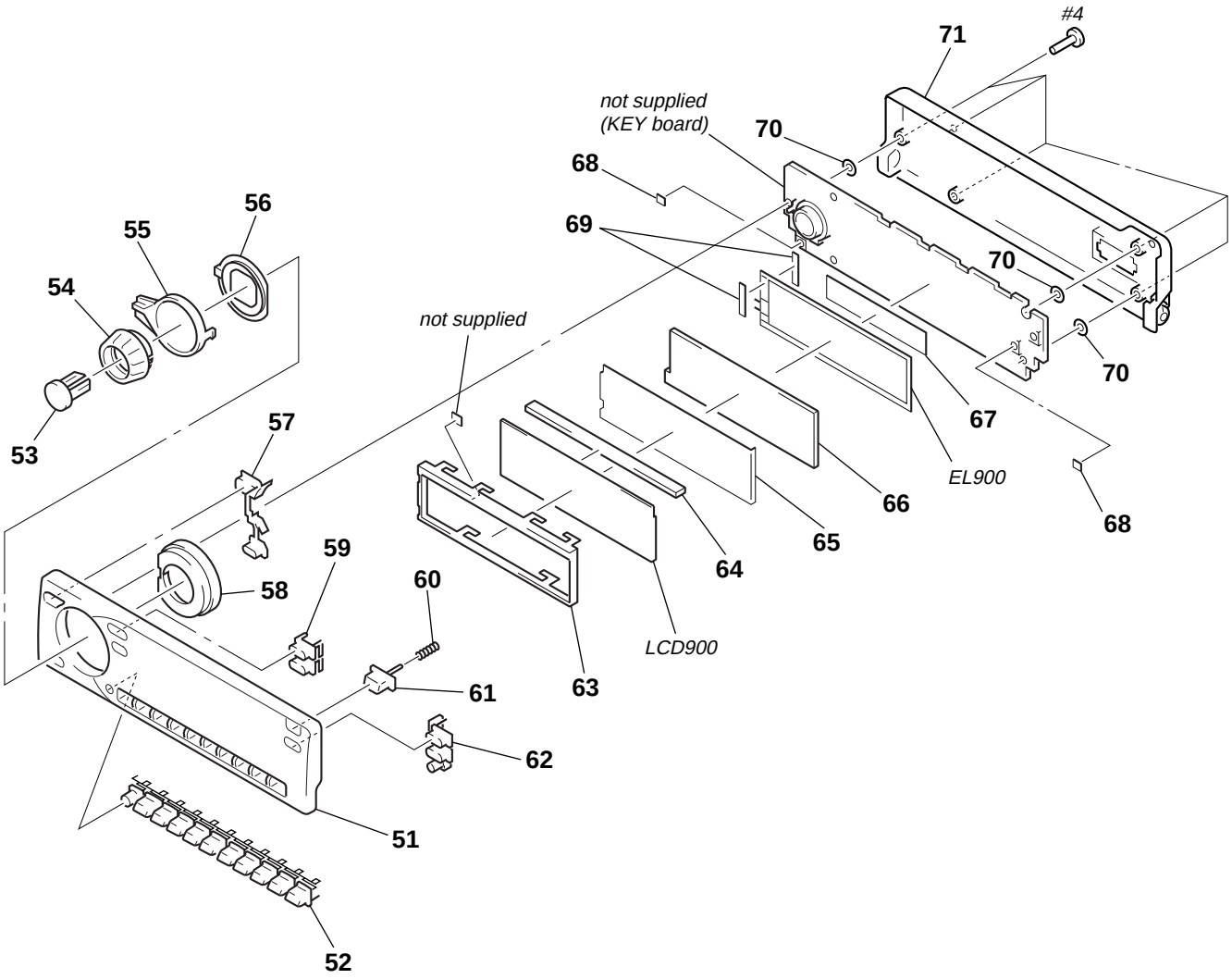
(1) CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
1	3-022-310-01	COLLAR	
2	X-3375-093-3	PANEL ASSY, SUB	
3	3-022-338-01	BUTTON (EJECT) (⏏)	
* 4	1-669-656-12	SUB BOARD	
5	X-3375-068-1	LOCK ASSY	
* 6	3-022-307-01	INSULATED PLATE	
7	3-935-003-01	SPRING (C DOOR), TORSION	
8	3-027-799-11	DOOR, CASSETTE	
9	3-713-786-51	SCREW +P 2X3	
10	3-953-235-01	DAMPER, OIL	
11	3-341-752-11	WASHER, POLYETHYLENE	
12	3-011-170-01	GEAR (HOLDER)	
13	X-3375-066-2	BRACKET (GEAR) ASSY	
* 14	3-022-316-01	COVER	
15	3-919-171-01	SCREW (2.6X6) (C TIGHT)	
16	3-915-923-01	SCREW, GROUND POINT	
* 17	A-3317-686-A	MAIN BOARD, COMPLETE (TYPE C)	
* 17	A-3317-690-A	MAIN BOARD, COMPLETE (TYPE B)	

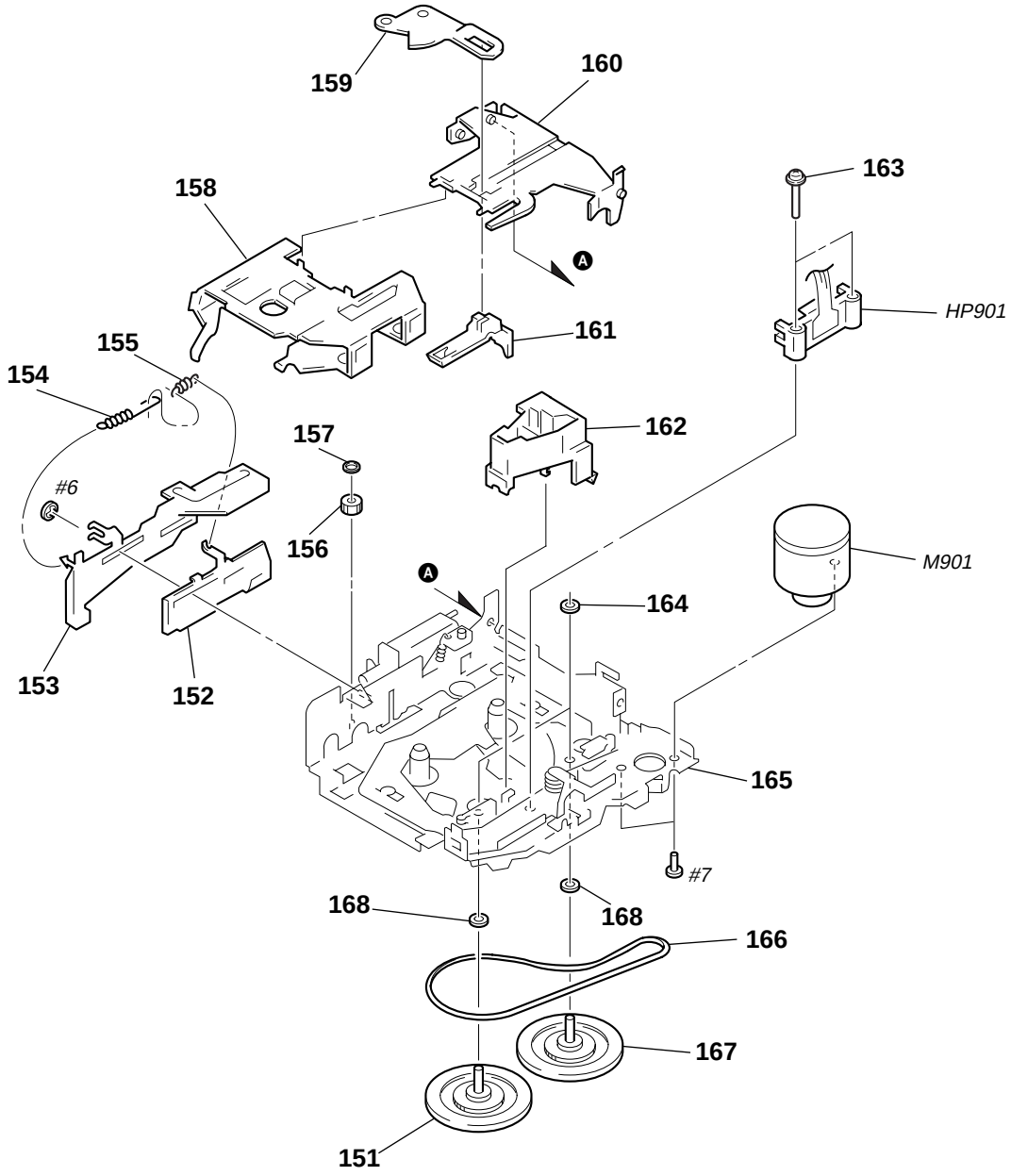
Ref. No.	Part No.	Description	Remark
* 17	A-3317-692-A	MAIN BOARD, COMPLETE (TYPE D)	
* 17	A-3317-694-A	MAIN BOARD, COMPLETE (TYPE A)	
* 18	3-011-078-01	BRACKET (POWER IC)	
* 19	3-022-317-01	BRACKET (AMP)	
* 20	3-022-306-01	HEAT SINK	
* 21	3-355-209-01	PLATE (B), GROUND	
22	1-776-527-71	CORD (WITH CONNECTOR) (ISO) (POWER)	
* 23	3-023-774-01	PLATE (LOCK), GROUND	
24	3-937-282-03	CASE (UPPER)	
* 25	3-034-264-01	SHEET (E)	
* 26	A-3313-646-A	INVERTOR BOARD, COMPLETE	
27	1-783-495-11	CORD (WITH CONNECTOR) (EL)	
28	3-937-812-03	CASE (LOWER)	
29	1-777-246-11	CORD (WITH CONNECTOR) (ANT)	
* 30	X-3375-081-1	CHASSIS ASSY	
* 31	3-025-352-01	PLATE (INV), SHIELD	
F701	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A)	
* LUG1	1-537-738-21	TERMINAL, EARTH	

(2) FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	X-3377-531-1	PANEL SUB ASSY, FRONT	
52	3-022-332-01	BUTTON (10 KEY) (SHIFT. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10)	
53	3-022-329-21	BUTTON (SOURCE)	
54	3-033-667-02	KNOB (VOL)	
55	3-022-323-24	LEVER (SHUTTLE) (+ ▶▶I ▶▶ . I◀◀ ◀◀ –. SEEK/AMS)	
56	3-022-324-02	PLATE (SHUTTLE), LIGHT GUIDE	
57	3-022-330-01	BUTTON (MODE) (MODE ◀II▶. OFF)	
58	3-030-648-01	PLATE (RING), LIGHT GUIDE	
59	3-022-331-01	BUTTON (SOUND) (SOUND. DSPL)	
60	3-932-225-01	SPRING (OPEN)	
61	3-022-333-01	BUTTON (OPEN)	
62	3-022-308-12	BUTTON (PTY) (PTY. AF/TA. TIR)	
* 63	3-022-327-01	PLATE (LCD), GROUND	
64	1-694-414-11	CONDUCTOR BOARD, CONNECTION	
* 65	3-034-558-01	ILUMINATOR (LCD)	
* 66	3-022-326-03	PLATE (LCD), LIGHT GUIDE	
67	3-017-984-01	TAPE (EL), DOUBLE STICK	
68	3-327-119-01	SPACER (A)	
69	3-023-554-01	SEET (EL), ADHESIVE	
70	3-027-109-01	WASHER, POLYETHYLENE	
71	X-3375-085-4	PANEL ASSY, FRONT BACK	
EL900	1-517-766-11	LIGHT, ELECTRO LUMINESCENT	
LCD900	1-803-504-11	DISPLAY PANEL, LIQUID CRYSTAL	

(3) MECHANISM DECK SECTION (MG-25D-136)



Ref. No.	Part No.	Description	Remark
151	A-3291-667-A	CLUTCH (FR) ASSY	
* 152	3-019-130-01	LEVER (LDG-A)	
* 153	3-019-131-01	LEVER (LDG-B)	
154	3-020-539-01	SPRING (LD-1), TENSION	
155	3-020-540-01	SPRING (LD-2), TENSION	
156	3-020-542-01	GEAR (LOADING FT)	
157	3-341-753-11	WASHER, POLYETHYLENE	
158	3-020-533-01	HOUSING	
* 159	3-020-532-01	ARM (SUCTION)	
160	3-020-534-01	HANGER	

Ref. No.	Part No.	Description	Remark
161	3-933-346-01	CATCHER	
162	3-933-344-01	GUIDE (C)	
163	3-014-798-01	SCREW (HEAD), SPECIAL	
164	3-364-151-01	WASHER	
165	X-3375-625-1	CHASSIS (SV) ASSY (D)	
166	3-017-302-01	BELT (25)	
167	3-936-853-01	FLYWHEEL (F)	
168	3-701-437-21	WASHER	
HP901	1-500-157-21	HEAD, MAGNETIC (PLAYBACK)	
M901	A-3291-665-A	MOTOR ASSY, MAIN (CAPSTAN/REEL)	

SECTION 9
ELECTRICAL PARTS LIST

INVERTER **KEY**

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH

When indicating parts by reference number, please include the board.

- Abbreviation
  TYPE A : ENGLISH, FRENCH
  TYPE B : ENGLISH, GERMAN
  TYPE C : ENGLISH, SPANISH
  TYPE D : ENGLISH, ITALIAN

Ref. No.	Part No.	Description			Remark
*	A-3313-646-A	INVERTER BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C551	1-126-157-11	ELECT	10uF	20%	16V
C552	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C553	1-126-934-11	ELECT	220uF	20%	10V
C554	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C555	1-124-257-00	ELECT	2.2uF	20%	50V
C556	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C557	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
		< CONNECTOR >			
* CN550	1-564-507-11	PLUG, CONNECTOR 4P			
* CN551	1-564-505-11	PLUG, CONNECTOR 2P			
		< DIODE >			
D550	8-719-422-49	DIODE MA8056-L			
D551	8-719-422-80	DIODE MA8075-H-TX			
D552	8-719-404-50	DIODE MA111-TX			
D553	8-719-033-43	DIODE RB751H			
D554	8-719-422-49	DIODE MA8056-L			
		< IC >			
IC550	8-759-495-75	IC NJM317F			
		< TRANSISTOR >			
Q552	8-729-421-22	TRANSISTOR UN2211			
Q553	8-729-026-68	TRANSISTOR 2SD2525 (TP)			
Q554	8-729-421-22	TRANSISTOR UN2211			
Q555	8-729-903-46	TRANSISTOR 2SB1132-P			
Q556	8-729-016-11	TRANSISTOR 2SD1507M			
Q557	8-729-021-94	FET 2SK1657-T1B			
		< RESISTOR >			
R552	1-216-198-00	RES,CHIP	1K	5%	1/8W
R553	1-216-198-00	RES,CHIP	1K	5%	1/8W
R555	1-216-158-00	RES,CHIP	22	5%	1/8W
R556	1-216-158-00	RES,CHIP	22	5%	1/8W
R557	1-216-001-00	METAL CHIP	10	5%	1/10W
R558	1-216-097-00	RES,CHIP	100K	5%	1/10W
R559	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R560	1-216-063-00	RES,CHIP	3.9K	5%	1/10W
R561	1-216-180-00	RES,CHIP	180	5%	1/8W
R562	1-216-097-00	RES,CHIP	100K	5%	1/10W
R563	1-216-097-00	RES,CHIP	100K	5%	1/10W
		< TRANSFORMER >			
T550	1-431-831-11	TRANSFORMER, OSCILLATION (EL)			
		KEY BOARD			
		**********			
	1-694-414-11	CONDUCTOR BOARD, CONNECTION			
	3-017-984-01	TAPE (EL), DOUBLE STICK			
*	3-022-326-03	PLATE (LCD), LIGHT GUIDE			
*	3-022-327-01	PLATE (LCD), GROUND			
	3-023-554-01	SHEET (EL), ADHESIVE			
*	3-034-558-01	ILLUMINATOR (LCD)			
	3-327-119-01	SPACER (A)			
		< CAPACITOR >			
C900	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C901	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C902	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C903	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C904	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C905	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
		< CONNECTOR >			
CN900	1-778-183-11	PLUG, CONNECTOR 18P			
		< DIODE >			
D901	8-719-420-90	DIODE MA8051-M			
D903	8-719-420-90	DIODE MA8051-M			
		< ELECTRO LUMINESCENT LIGHT >			
EL900	1-517-766-11	LIGHT, ELECTRO LUMINESCENT			
		< COIL >			
FB901	1-414-233-22	INDUCTOR CHIP 0uH			
		< IC >			
IC900	8-759-496-75	IC uPD16432BGC-018-9EU			

KEY MAIN

Ref. No.	Part No.	Description	Remark
IC901	8-749-012-25	IC RS-170-TU	
		< LIQUID CRYSTAL DISPLAY >	
LCD900	1-803-504-11	DISPLAY PANEL, LIQUID CRYSTAL	
		< LED >	
LED900	8-719-987-45	LED CL-155Y/PG-CD (ILLUMINATION)	
LED901	8-719-987-45	LED CL-155Y/PG-CD (ILLUMINATION)	
LED902	8-719-987-45	LED CL-155Y/PG-CD (ILLUMINATION)	
LED903	8-719-987-45	LED CL-155Y/PG-CD (ILLUMINATION)	
LED904	8-719-987-45	LED CL-155Y/PG-CD (ILLUMINATION)	
LED905	8-719-987-45	LED CL-155Y/PG-CD (ILLUMINATION)	
LED906	8-719-033-13	LED CL-170Y-CD-T (ILLUMINATION)	
LED907	8-719-033-14	LED CL-170PG-CD-T (ILLUMINATION)	
		< SWITCH >	
LSW900	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (OFF)	
LSW901	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (MODE, ◄I►)	
LSW902	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (SOURCE)	
LSW903	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (SOUND)	
LSW904	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (DSPL)	
LSW905	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (SHIFT)	
LSW906	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (1)	
LSW907	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (2)	
LSW908	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (3)	
LSW909	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (LIST)	
LSW910	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (AF/TA)	
LSW911	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (TIR)	
LSW912	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (10)	
LSW913	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (9)	
LSW914	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (8)	
LSW915	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (7)	
LSW916	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (6)	
LSW917	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (5)	
LSW918	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (4)	
		< TRANSISTOR >	
Q900	8-729-904-66	TRANSISTOR DTD113EK	
Q901	8-729-904-66	TRANSISTOR DTD113EK	
Q902	8-729-424-08	TRANSISTOR UN2111	
Q903	8-729-424-08	TRANSISTOR UN2111	
		< RESISTOR >	

Ref. No.	Part No.	Description			Remark
R901	1-216-045-00	METAL CHIP	680	5%	1/10W
R902	1-216-045-00	METAL CHIP	680	5%	1/10W
R903	1-216-045-00	METAL CHIP	680	5%	1/10W
R904	1-216-049-11	RES,CHIP	1K	5%	1/10W
R905	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R906	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R907	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R908	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R909	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R910	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R911	1-216-045-00	METAL CHIP	680	5%	1/10W
R912	1-216-045-00	METAL CHIP	680	5%	1/10W
R913	1-216-045-00	METAL CHIP	680	5%	1/10W
R914	1-216-049-11	RES,CHIP	1K	5%	1/10W
R915	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R916	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R917	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R918	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R919	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R920	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R931	1-216-037-00	METAL CHIP	330	5%	1/10W
R932	1-216-041-00	METAL CHIP	470	5%	1/10W
R933	1-216-042-00	METAL CHIP	510	5%	1/10W
R935	1-216-182-00	RES,CHIP	220	5%	1/8W
R936	1-216-182-00	RES,CHIP	220	5%	1/8W
R937	1-216-037-00	METAL CHIP	330	5%	1/10W
R938	1-216-037-00	METAL CHIP	330	5%	1/10W
R939	1-216-048-00	METAL CHIP	910	5%	1/10W
R941	1-216-025-00	RES,CHIP	100	5%	1/10W
R942	1-216-041-00	METAL CHIP	470	5%	1/10W
R943	1-216-025-00	RES,CHIP	100	5%	1/10W
R944	1-216-037-00	METAL CHIP	330	5%	1/10W
R945	1-216-081-00	METAL CHIP	22K	5%	1/10W
R946	1-216-089-00	RES,CHIP	47K	5%	1/10W
R947	1-216-089-00	RES,CHIP	47K	5%	1/10W
R948	1-216-049-11	RES,CHIP	1K	5%	1/10W
R949	1-216-049-11	RES,CHIP	1K	5%	1/10W
R950	1-216-049-11	RES,CHIP	1K	5%	1/10W
R951	1-216-049-11	RES,CHIP	1K	5%	1/10W
R952	1-216-095-00	RES,CHIP	82K	5%	1/10W
R953	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R954	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R955	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R956	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R957	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R958	1-216-057-00	METAL CHIP	2.2K	5%	1/10W

Ref. No.	Part No.	Description	Remark
		< ROTARY ENCODER >	
RE900	1-475-014-11	ENCODER, ROTARY (VOLUME/BASS/TREBLE/BALANCE/FADER CONTROL)	
		< SWITCH >	
S900	1-771-290-11	SWITCH, SLIDE (I◄◄ ◄◄ –, + ►►I ►►: SEEK/AMS)	
**********			
*	A-3317-686-A	MAIN BOARD, COMPLETE (TYPE C)	
*	A-3317-690-A	MAIN BOARD, COMPLETE (TYPE B)	
*	A-3317-692-A	MAIN BOARD, COMPLETE (TYPE D)	
*	A-3317-694-A	MAIN BOARD, COMPLETE (TYPE A)	
		**********	
*	3-011-078-01	BRACKET (POWER IC)	
*	3-022-306-01	HEAT SINK	
*	3-022-317-01	BRACKET (AMP)	
*	3-025-352-01	PLATE (INV), SHIELD	
	7-685-794-09	SCREW +PTT 2.6X10 (S)	
		< BUZZER >	
BZ600	1-504-920-11	BUZZER	

Ref. No.	Part No.	Description			Remark
		< CAPACITOR >			
C10	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C11	1-104-665-11	ELECT	100uF	20%	10V
C12	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C13	1-104-665-11	ELECT	100uF	20%	10V
C14	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C15	1-104-665-11	ELECT	100uF	20%	10V
C16	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C17	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C18	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C19	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C20	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C21	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C22	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C23	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C24	1-126-157-11	ELECT	10uF	20%	16V
C25	1-124-234-00	ELECT	22uF	20%	16V
C27	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C28	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C29	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C31	1-124-589-11	ELECT	47uF	20%	16V
C32	1-126-157-11	ELECT	10uF	20%	16V
C33	1-163-234-11	CERAMIC CHIP	20PF	5%	50V
C34	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C35	1-124-234-00	ELECT	22uF	20%	16V
C36	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C37	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C38	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C39	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C40	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C41	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C50	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C51	1-164-344-11	CERAMIC CHIP	0.068uF	10%	25V
C52	1-104-942-11	ELECT	1uF	20%	50V
C53	1-126-157-11	ELECT	10uF	20%	16V
C54	1-126-157-11	ELECT	10uF	20%	16V
C55	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C56	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C60	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C61	1-126-572-11	ELECT	4.7uF	20%	35V
C62	1-124-257-00	ELECT	2.2uF	20%	50V
C63	1-163-139-00	CERAMIC CHIP	820PF	5%	50V (TYPE B)
C63	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V (TYPE A/C/D)
C64	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C80	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C81	1-126-572-11	ELECT	4.7uF	20%	35V
C82	1-124-257-00	ELECT	2.2uF	20%	50V
C83	1-163-139-00	CERAMIC CHIP	820PF	5%	50V (TYPE B)
C83	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V (TYPE A/C/D)
C84	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C100	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C101	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C102	1-126-157-11	ELECT	10uF	20%	16V
C103	1-126-157-11	ELECT	10uF	20%	16V
C104	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C105	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C106	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C107	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C150	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C152	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C153	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C154	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C155	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C158	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C159	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C160	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C161	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C162	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C201	1-126-935-11	ELECT	470uF	20%	16V
C202	1-124-234-00	ELECT	22uF	20%	16V
C204	1-117-370-11	CERAMIC CHIP	10uF		10V
C205	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C206	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C207	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C230	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C231	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C232	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C233	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C234	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C235	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C236	1-126-159-11	ELECT	0.47uF	20%	50V
C237	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C240	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C241	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C242	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C243	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C244	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C245	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C246	1-126-159-11	ELECT	0.47uF	20%	50V
C247	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C250	1-124-234-00	ELECT	22uF	20%	16V
C251	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C252	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C253	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C254	1-131-360-00	TANTALUM	15uF	10%	25V
C255	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C301	1-124-257-00	ELECT	2.2uF	20%	50V
C303	1-124-257-00	ELECT	2.2uF	20%	50V
C304	1-124-257-00	ELECT	2.2uF	20%	50V
C305	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C306	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C307	1-126-157-11	ELECT	10uF	20%	16V
C308	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C309	1-126-159-11	ELECT	0.47uF	20%	50V
C310	1-126-157-11	ELECT	10uF	20%	16V
C316	1-124-234-00	ELECT	22uF	20%	16V
C320	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C321	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C322	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C330	1-126-157-11	ELECT	10uF	20%	16V
C331	1-115-175-11	ELECT	100uF	20%	16V

MAIN

Ref. No.	Part No.	Description			Remark
C332	1-126-157-11	ELECT	10uF	20%	16V
C333	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C340	1-126-157-11	ELECT	10uF	20%	16V
C341	1-115-175-11	ELECT	100uF	20%	16V
C342	1-126-157-11	ELECT	10uF	20%	16V
C343	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C350	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C351	1-126-154-11	ELECT	47uF	20%	6.3V
C352	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C353	1-124-584-00	ELECT	100uF	20%	10V
C354	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C355	1-126-157-11	ELECT	10uF	20%	16V
C356	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C357	1-124-584-00	ELECT	100uF	20%	10V
C358	1-126-572-11	ELECT	4.7uF	20%	35V
C359	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C360	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C361	1-124-234-00	ELECT	22uF	20%	16V
C362	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V
C363	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C364	1-126-157-11	ELECT	10uF	20%	16V
C365	1-126-157-11	ELECT	10uF	20%	16V
C366	1-126-572-11	ELECT	4.7uF	20%	35V
C367	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C401	1-124-257-00	ELECT	2.2uF	20%	50V
C403	1-124-257-00	ELECT	2.2uF	20%	50V
C404	1-124-257-00	ELECT	2.2uF	20%	50V
C405	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C406	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C407	1-126-157-11	ELECT	10uF	20%	16V
C408	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C409	1-126-159-11	ELECT	0.47uF	20%	50V
C410	1-126-157-11	ELECT	10uF	20%	16V
C416	1-124-234-00	ELECT	22uF	20%	16V
C420	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C421	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C422	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C430	1-126-157-11	ELECT	10uF	20%	16V
C431	1-115-175-11	ELECT	100uF	20%	16V
C432	1-126-157-11	ELECT	10uF	20%	16V
C433	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C440	1-126-157-11	ELECT	10uF	20%	16V
C441	1-115-175-11	ELECT	100uF	20%	16V
C442	1-126-157-11	ELECT	10uF	20%	16V
C443	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C461	1-124-234-00	ELECT	22uF	20%	16V
C462	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V
C463	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C464	1-126-157-11	ELECT	10uF	20%	16V
C465	1-126-157-11	ELECT	10uF	20%	16V
C466	1-126-572-11	ELECT	4.7uF	20%	35V
C467	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C500	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C501	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C503	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C504	1-125-710-11	DOUBLE LAYER	0.1F		5.5V
C505	1-124-584-00	ELECT	100uF	20%	10V
C506	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V

Ref. No.	Part No.	Description			Remark
C507	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C510	1-126-157-11	ELECT	10uF	20%	16V
C511	1-124-234-00	ELECT	22uF	20%	16V
C513	1-126-157-11	ELECT	10uF	20%	16V
C514	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C515	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C516	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C517	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C518	1-126-157-11	ELECT	10uF	20%	16V
C519	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C520	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C521	1-164-346-11	CERAMIC CHIP	1uF		16V
C530	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C531	1-124-584-00	ELECT	100uF	20%	10V
C532	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C533	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C550	1-126-157-11	ELECT	10uF	20%	16V
C551	1-162-558-11	CERAMIC	100PF	10%	1KV
C601	1-126-157-11	ELECT	10uF	20%	16V
C602	1-126-154-11	ELECT	47uF	20%	6.3V
C603	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C604	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C605	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C606	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C607	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C608	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C609	1-124-229-00	ELECT	33uF	20%	10V
C610	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C611	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C612	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C613	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C614	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C615	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C650	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C651	1-126-157-11	ELECT	10uF	20%	16V
C701	1-111-233-11	ELECT	5600uF	20%	16V
C702	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C703	1-115-334-11	FILM	0.47uF	5%	50V
C704	1-124-589-11	ELECT	47uF	20%	16V
C705	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C706	1-136-227-11	MYLAR	0.001uF	5%	50V
C707	1-136-227-11	MYLAR	0.001uF	5%	50V
C708	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C709	1-115-326-11	FILM	0.1uF	5%	50V
C710	1-126-572-11	ELECT	4.7uF	20%	35V
C711	1-126-933-11	ELECT	100uF	20%	16V
C712	1-104-942-11	ELECT	1uF	20%	50V
C713	1-126-157-11	ELECT	10uF	20%	16V
C714	1-126-572-11	ELECT	4.7uF	20%	35V
C715	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C720	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C740	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C750	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C760	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C770	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C780	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C781	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V

Ref. No.	Part No.	Description	Remark
C782	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C783	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C784	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C785	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C786	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C787	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C788	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C789	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
		< CONNECTOR/JACK >	
* CN201	1-506-995-11	PIN, CONNECTOR (PC BOARD) 13P	
CN250	1-766-260-11	CONNECTOR, FFC/FPC (ZIF) 7P	
CN500	1-770-411-11	CONNECTOR, BOARD TO BOARD 20P	
* CN553	1-564-510-11	PLUG, CONNECTOR 7P	
CN600	1-580-907-31	PLUG, CONNECTOR (BUS CONTROL IN)	
CN700	1-774-701-11	PIN, CONNECTOR 16P	
CN780	1-774-699-12	JACK, PIN 4P (BUS AUDIO IN, LINE OUT REAR)	
CN781	1-774-699-12	JACK, PIN 4P (LINE OUT FRONT, SUB OUT)	
		< CONPOSITION CIRCUIT BLOCK >	
CP10	1-519-504-11	GAP, DISCHARGE	
		< DIODE >	
D10	8-719-040-04	DIODE MA721WK-(TX)	
D11	8-719-422-49	DIODE MA8056-L	
D12	8-719-422-97	DIODE MA8091-M	
D50	8-719-422-16	DIODE MA8039-L-TX	
D200	8-719-040-04	DIODE MA721WK-(TX)	
D201	8-719-313-73	DIODE SFPB-52	
D202	8-719-422-97	DIODE MA8091-M	
D350	8-719-422-16	DIODE MA8039-L-TX	
D351	8-719-422-16	DIODE MA8039-L-TX	
D501	8-719-423-23	DIODE MA8110-M	
D502	8-719-423-23	DIODE MA8110-M	
D503	8-719-423-32	DIODE MA8120-M	
D504	8-719-423-32	DIODE MA8120-M	
D506	8-719-400-20	DIODE MA152WA	
D507	8-719-404-50	DIODE MA111-TX	
D508	8-719-422-64	DIODE MA8062-M	
D509	8-719-422-64	DIODE MA8062-M	
D510	8-719-404-50	DIODE MA111-TX	
D512	8-719-422-64	DIODE MA8062-M	
D513	8-719-422-64	DIODE MA8062-M	
D514	8-719-422-64	DIODE MA8062-M	
D515	8-719-422-64	DIODE MA8062-M	
D516	8-719-422-64	DIODE MA8062-M	
D517	8-719-422-64	DIODE MA8062-M	
D518	8-719-422-64	DIODE MA8062-M	
D519	8-719-422-64	DIODE MA8062-M	
D520	8-719-422-64	DIODE MA8062-M	
D521	8-719-422-64	DIODE MA8062-M	
D522	8-719-422-64	DIODE MA8062-M	
D523	8-719-404-50	DIODE MA111-TX	
D524	8-719-040-04	DIODE MA721WK-(TX)	
D525	8-719-404-50	DIODE MA111-TX	
D526	8-719-422-64	DIODE MA8062-M	
D527	8-719-022-90	DIODE MA8160M	

Ref. No.	Part No.	Description	Remark
D528	8-719-022-90	DIODE MA8160M	
D530	8-719-067-56	DIODE MA112-TX	
D532	8-719-067-56	DIODE MA112-TX	
D533	8-719-404-50	DIODE MA111-TX	
D534	8-719-404-50	DIODE MA111-TX	
D550	8-719-422-64	DIODE MA8062-M	
D601	8-719-022-90	DIODE MA8160M	
D602	8-719-060-80	DIODE MA8180-L-TX	
D603	8-719-060-80	DIODE MA8180-L-TX	
D604	8-719-404-50	DIODE MA111-TX	
D605	8-719-422-64	DIODE MA8062-M	
D606	8-719-017-62	DIODE MA8068-L-TX	
D608	8-719-033-43	DIODE RB751H	
D701	8-719-313-73	DIODE SFPB-52	
D702	8-719-313-73	DIODE SFPB-52	
D703	8-719-313-73	DIODE SFPB-52	
D704	8-719-313-73	DIODE SFPB-52	
D705	8-719-313-73	DIODE SFPB-52	
D706	8-719-313-73	DIODE SFPB-52	
D707	8-719-313-73	DIODE SFPB-52	
D708	8-719-313-73	DIODE SFPB-52	
D709	8-719-422-64	DIODE MA8062-M	
D710	8-719-049-38	DIODE 1N5404TU	
D711	8-719-404-50	DIODE MA111-TX	
D712	8-719-313-73	DIODE SFPB-52	
D713	8-719-422-76	DIODE MA8075-M	
D714	8-719-801-78	DIODE 1SS184	
D715	8-719-404-50	DIODE MA111-TX	
D716	8-719-422-64	DIODE MA8062-M	
D717	8-719-404-50	DIODE MA111-TX	
D718	8-719-313-73	DIODE SFPB-52	
D719	8-719-313-73	DIODE SFPB-52	
		< IC RINK >	
F550	1-533-674-11	RINK, CHIP IC 0.5A	
		< COIL >	
FB100	1-414-233-22	INDUCTOR CHIP 0uH	
FB500	1-414-233-22	INDUCTOR CHIP 0uH	
FB600	1-414-233-22	INDUCTOR CHIP 0uH	
		< IC >	
IC10	8-759-448-85	IC BU2624FV-E2	
IC11	8-759-184-64	IC TC4W66FU	
IC50	8-759-711-82	IC NJM4580E	
IC51	8-759-242-66	IC TC4W66F	
IC100	8-759-374-66	IC MSM6688GS-2K	
IC101	8-759-448-87	IC MSM6684JSDR1	
IC150	8-759-492-59	IC SAA6588T-118	
IC201	8-759-823-87	IC LB1638M	
IC250	8-752-079-79	IC CXA2510AQ-T4	
IC301	8-752-078-67	IC CXA1946BQ-T6	
IC302	8-759-711-82	IC NJM4580E	
IC310	8-759-444-50	IC TDA8574 (T)	
IC320	8-759-711-82	IC NJM4580E	
IC350	8-752-091-06	IC CXA1846BN-T4	
IC383	8-759-711-82	IC NJM4580E	

MAIN

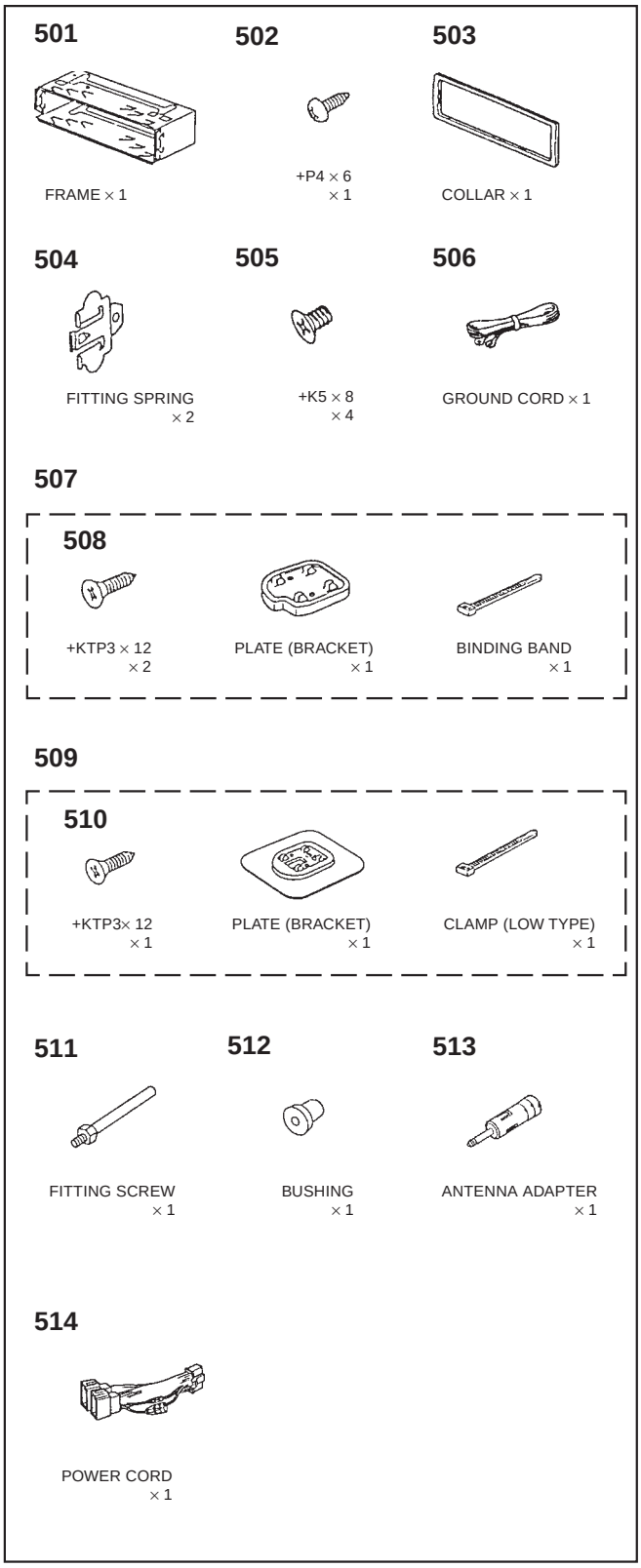
Ref. No.	Part No.	Description	Remark
IC410	8-759-444-50	IC TDA8574 (T)	
IC500	8-759-443-72	IC RH5VL43AA-T1	
IC501	8-759-495-76	IC RN5VD33AA-TL	
IC502	8-759-347-50	IC BA3918-V3	
IC503	8-759-540-27	IC TA78DL06AS	
IC600	8-759-590-70	IC MB90574PFV-G-209-BND	
IC602	8-759-449-89	IC BA8270F-E2	
IC650	8-759-577-75	IC MSM6656A-687GS-KR1 (TYPE A)	
IC650	8-759-577-76	IC MSM6656A-688GS-KR1 (TYPE B)	
IC650	8-759-577-77	IC MSM6656A-689GS-KR1 (TYPE C)	
IC650	8-759-581-85	IC MSM6656A-690GS-KR1 (TYPE D)	
IC700	8-759-486-44	IC TDA7386	
		< CONNECTOR/JACK >	
* J10	1-506-984-11	PIN, CONNECTOR (PC BOARD) 2P	
J500	1-566-822-41	JACK (REMOTE IN)	
		< SHORT >	
JC501	1-216-295-00	SHORT 0	
JC703	1-216-295-00	SHORT 0	
JC781	1-216-295-00	SHORT 0	
		< COIL >	
L10	1-414-146-31	INDUCTOR 2.2uH	
L11	1-414-146-31	INDUCTOR 2.2uH	
L12	1-410-204-31	INDUCTOR CHIP 10uH	
L13	1-412-006-31	INDUCTOR CHIP 10uH	
L14	1-410-999-11	INDUCTOR CHIP 3.3uH	
L100	1-410-204-31	INDUCTOR CHIP 10uH	
L150	1-410-204-31	INDUCTOR CHIP 10uH	
L500	1-410-513-11	INDUCTOR 22uH	
L550	1-414-712-21	INDUCTOR 1mH	
L650	1-410-204-31	INDUCTOR CHIP 10uH	
L700	1-416-712-11	COIL, CHOKE	
		< EARTH TERMINAL >	
* LUG1	1-537-738-21	TERMINAL, EARTH	
		< TRANSISTOR >	
Q10	8-729-920-85	TRANSISTOR 2SD1664-QR	
Q11	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q12	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q13	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q14	8-729-421-22	TRANSISTOR UN2211	
Q15	8-729-020-67	TRANSISTOR XN1A312-TX	
Q16	8-729-421-22	TRANSISTOR UN2211	
Q17	8-729-021-94	FET 2SK1657-T1B	
Q50	8-729-920-21	TRANSISTOR DTC314TKH04	
Q51	8-729-020-67	TRANSISTOR XN1A312-TX	
Q52	8-729-421-22	TRANSISTOR UN2211	
Q53	8-729-421-22	TRANSISTOR UN2211	
Q60	8-729-920-21	TRANSISTOR DTC314TKH04	
Q80	8-729-920-21	TRANSISTOR DTC314TKH04	
Q201	8-729-421-22	TRANSISTOR UN2211	
Q202	8-729-020-67	TRANSISTOR XN1A312-TX	
Q203	8-729-931-13	TRANSISTOR 2SD1858-P-TV2	
Q204	8-729-106-60	TRANSISTOR 2SB1115A	
Q250	8-729-421-22	TRANSISTOR UN2211	
Q330	8-729-420-68	TRANSISTOR 2SD1328-R-TX	
Q340	8-729-420-68	TRANSISTOR 2SD1328-R-TX	
Q360	8-729-920-21	TRANSISTOR DTC314TKH04	
Q361	8-729-920-21	TRANSISTOR DTC314TKH04	
Q362	8-729-920-21	TRANSISTOR DTC314TKH04	
Q430	8-729-420-68	TRANSISTOR 2SD1328-R-TX	
Q440	8-729-420-68	TRANSISTOR 2SD1328-R-TX	
Q460	8-729-920-21	TRANSISTOR DTC314TKH04	
Q461	8-729-920-21	TRANSISTOR DTC314TKH04	
Q462	8-729-920-21	TRANSISTOR DTC314TKH04	
Q501	8-729-020-67	TRANSISTOR XN1A312-TX	
Q502	8-729-020-67	TRANSISTOR XN1A312-TX	
Q503	8-729-424-59	TRANSISTOR UN2212	
Q504	8-729-931-13	TRANSISTOR 2SD1858-P-TV2	
Q505	8-729-020-67	TRANSISTOR XN1A312-TX	
Q506	8-729-931-13	TRANSISTOR 2SD1858-P-TV2	
Q507	8-729-020-67	TRANSISTOR XN1A312-TX	
Q508	8-729-216-22	TRANSISTOR 2SA1162-G	
Q509	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q510	8-729-015-74	TRANSISTOR UN5111	
Q511	8-729-015-74	TRANSISTOR UN5111	
Q512	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q550	8-729-019-03	TRANSISTOR 2SB1202FA-T-TL	
Q551	8-729-421-22	TRANSISTOR UN2211	
Q600	8-729-421-22	TRANSISTOR UN2211	
Q601	8-729-421-22	TRANSISTOR UN2211	
Q602	8-729-403-35	TRANSISTOR UN5113	
Q603	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q700	8-729-424-56	TRANSISTOR UN211L	
Q701	8-729-021-94	FET 2SK1657-T1B	
Q702	8-729-021-94	FET 2SK1657-T1B	
Q703	8-729-821-63	TRANSISTOR 2SB1203FAT	
Q704	8-729-421-22	TRANSISTOR UN2211	
Q705	8-729-230-49	TRANSISTOR 2SC2712-YG	
		< RESISTOR >	
R9	1-216-049-11	RES,CHIP 1K 5% 1/10W	
R10	1-216-049-11	RES,CHIP 1K 5% 1/10W	
R11	1-216-037-00	METAL CHIP 330 5% 1/10W	
R12	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R13	1-216-097-00	RES,CHIP 100K 5% 1/10W	
R14	1-216-097-00	RES,CHIP 100K 5% 1/10W	
R15	1-216-049-11	RES,CHIP 1K 5% 1/10W	
R17	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R18	1-216-065-00	RES,CHIP 4.7K 5% 1/10W	
R19	1-216-049-11	RES,CHIP 1K 5% 1/10W	
R20	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R21	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R22	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R23	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R25	1-216-089-00	RES,CHIP 47K 5% 1/10W	
R30	1-216-025-00	RES,CHIP 100 5% 1/10W	
R31	1-216-089-00	RES,CHIP 47K 5% 1/10W	
R32	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R33	1-216-089-00	RES,CHIP 47K 5% 1/10W	
R34	1-216-081-00	METAL CHIP 22K 5% 1/10W	

Ref. No.	Part No.	Description			Remark
R35	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R36	1-216-049-11	RES,CHIP	1K	5%	1/10W
R50	1-216-073-00	METAL CHIP	10K	5%	1/10W
R51	1-216-081-00	METAL CHIP	22K	5%	1/10W
R52	1-216-045-00	METAL CHIP	680	5%	1/10W
R53	1-216-037-00	METAL CHIP	330	5%	1/10W
R54	1-216-089-00	RES,CHIP	47K	5%	1/10W
R55	1-216-073-00	METAL CHIP	10K	5%	1/10W
R56	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R57	1-216-001-00	METAL CHIP	10	5%	1/10W
R60	1-216-081-00	METAL CHIP	22K	5%	1/10W
R61	1-216-089-00	RES,CHIP	47K	5%	1/10W
R62	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R63	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R64	1-216-073-00	METAL CHIP	10K	5%	1/10W
R65	1-216-071-00	METAL CHIP	8.2K	5%	1/10W (TYPE A/C/D)
R66	1-216-295-00	SHORT	0		
R65	1-216-077-00	METAL CHIP	15K	5%	1/10W (TYPE B)
R80	1-216-081-00	METAL CHIP	22K	5%	1/10W
R81	1-216-089-00	RES,CHIP	47K	5%	1/10W
R82	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R83	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R84	1-216-073-00	METAL CHIP	10K	5%	1/10W
R85	1-216-071-00	METAL CHIP	8.2K	5%	1/10W (TYPE A/C/D)
R86	1-216-295-00	SHORT	0		
R85	1-216-077-00	METAL CHIP	15K	5%	1/10W (TYPE B)
R100	1-216-097-00	RES,CHIP	100K	5%	1/10W
R101	1-216-849-11	METAL CHIP	220K	5%	1/16W
R102	1-216-809-11	METAL CHIP	100	5%	1/16W
R103	1-216-825-11	METAL CHIP	2.2K	5%	1/16W (TYPE A/C/D)
R104	1-216-821-11	METAL CHIP	1K	5%	1/16W
R105	1-216-089-00	RES,CHIP	47K	5%	1/10W
R106	1-216-097-00	RES,CHIP	100K	5%	1/10W
R107	1-216-845-11	METAL CHIP	100K	5%	1/16W
R108	1-216-845-11	METAL CHIP	100K	5%	1/16W
R109	1-216-845-11	METAL CHIP	100K	5%	1/16W
R110	1-216-089-00	RES,CHIP	47K	5%	1/10W
R111	1-216-845-11	METAL CHIP	100K	5%	1/16W
R150	1-216-853-11	METAL CHIP	470K	5%	1/16W
R151	1-216-821-11	METAL CHIP	1K	5%	1/16W
R152	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R154	1-216-817-11	METAL CHIP	470	5%	1/16W
R155	1-216-814-11	METAL CHIP	270	5%	1/16W
R156	1-216-814-11	METAL CHIP	270	5%	1/16W
R157	1-216-001-00	METAL CHIP	10	5%	1/10W
R158	1-216-001-00	METAL CHIP	10	5%	1/10W
R201	1-216-150-00	RES,CHIP	10	5%	1/8W
R202	1-216-150-00	RES,CHIP	10	5%	1/8W
R203	1-216-150-00	RES,CHIP	10	5%	1/8W
R204	1-216-150-00	RES,CHIP	10	5%	1/8W
R205	1-216-073-00	METAL CHIP	10K	5%	1/10W
R206	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R207	1-216-049-11	RES,CHIP	1K	5%	1/10W
R209	1-216-089-00	RES,CHIP	47K	5%	1/10W
R230	1-216-097-00	RES,CHIP	100K	5%	1/10W
R231	1-216-097-00	RES,CHIP	100K	5%	1/10W
R232	1-216-027-00	METAL CHIP	120	5%	1/10W
R233	1-216-109-00	METAL CHIP	330K	5%	1/10W
R234	1-216-079-00	METAL CHIP	18K	5%	1/10W
R235	1-216-075-00	METAL CHIP	12K	5%	1/10W
R240	1-216-097-00	RES,CHIP	100K	5%	1/10W
R241	1-216-097-00	RES,CHIP	100K	5%	1/10W
R242	1-216-027-00	METAL CHIP	120	5%	1/10W
R243	1-216-109-00	METAL CHIP	330K	5%	1/10W
R244	1-216-079-00	METAL CHIP	18K	5%	1/10W
R245	1-216-075-00	METAL CHIP	12K	5%	1/10W
R250	1-216-681-11	METAL CHIP	18K	0.5%	1/10W
R251	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R252	1-216-077-00	METAL CHIP	15K	5%	1/10W
R253	1-216-105-00	RES,CHIP	220K	5%	1/10W
R254	1-216-089-00	RES,CHIP	47K	5%	1/10W
R255	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R301	1-216-073-00	METAL CHIP	10K	5%	1/10W
R302	1-216-073-00	METAL CHIP	10K	5%	1/10W
R303	1-216-073-00	METAL CHIP	10K	5%	1/10W
R304	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R305	1-216-079-00	METAL CHIP	18K	5%	1/10W
R306	1-216-077-00	METAL CHIP	15K	5%	1/10W
R307	1-216-809-11	METAL CHIP	100	5%	1/16W
R320	1-216-073-00	METAL CHIP	10K	5%	1/10W
R321	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R330	1-216-049-11	RES,CHIP	1K	5%	1/10W
R331	1-216-082-00	RES,CHIP	24K	5%	1/10W
R332	1-216-086-00	RES,CHIP	36K	5%	1/10W
R333	1-216-033-00	METAL CHIP	220	5%	1/10W
R334	1-216-081-00	METAL CHIP	22K	5%	1/10W
R335	1-216-049-11	RES,CHIP	1K	5%	1/10W
R336	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R340	1-216-049-11	RES,CHIP	1K	5%	1/10W
R341	1-216-082-00	RES,CHIP	24K	5%	1/10W
R342	1-216-086-00	RES,CHIP	36K	5%	1/10W
R343	1-216-033-00	METAL CHIP	220	5%	1/10W
R344	1-216-081-00	METAL CHIP	22K	5%	1/10W
R345	1-216-049-11	RES,CHIP	1K	5%	1/10W
R346	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R350	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R351	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R352	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R353	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R355	1-216-001-00	METAL CHIP	10	5%	1/10W
R356	1-216-109-00	METAL CHIP	330K	5%	1/10W
R360	1-216-077-00	METAL CHIP	15K	5%	1/10W
R361	1-216-085-00	METAL CHIP	33K	5%	1/10W
R362	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R363	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R364	1-216-033-00	METAL CHIP	220	5%	1/10W
R365	1-216-081-00	METAL CHIP	22K	5%	1/10W
R366	1-216-073-00	METAL CHIP	10K	5%	1/10W
R367	1-216-073-00	METAL CHIP	10K	5%	1/10W
R368	1-216-097-00	RES,CHIP	100K	5%	1/10W
R369	1-216-097-00	RES,CHIP	100K	5%	1/10W

MAIN

Ref. No.	Part No.	Description			Remark
R401	1-216-073-00	METAL CHIP	10K	5%	1/10W
R402	1-216-073-00	METAL CHIP	10K	5%	1/10W
R403	1-216-073-00	METAL CHIP	10K	5%	1/10W
R404	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R405	1-216-079-00	METAL CHIP	18K	5%	1/10W
R406	1-216-077-00	METAL CHIP	15K	5%	1/10W
R407	1-216-025-00	RES,CHIP	100	5%	1/10W
R420	1-216-073-00	METAL CHIP	10K	5%	1/10W
R421	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R422	1-216-073-00	METAL CHIP	10K	5%	1/10W
R423	1-216-073-00	METAL CHIP	10K	5%	1/10W
R430	1-216-049-11	RES,CHIP	1K	5%	1/10W
R431	1-216-082-00	RES,CHIP	24K	5%	1/10W
R432	1-216-086-00	RES,CHIP	36K	5%	1/10W
R433	1-216-033-00	METAL CHIP	220	5%	1/10W
R434	1-216-081-00	METAL CHIP	22K	5%	1/10W
R435	1-216-049-11	RES,CHIP	1K	5%	1/10W
R436	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R440	1-216-049-11	RES,CHIP	1K	5%	1/10W
R441	1-216-082-00	RES,CHIP	24K	5%	1/10W
R442	1-216-086-00	RES,CHIP	36K	5%	1/10W
R443	1-216-033-00	METAL CHIP	220	5%	1/10W
R444	1-216-081-00	METAL CHIP	22K	5%	1/10W
R445	1-216-049-11	RES,CHIP	1K	5%	1/10W
R446	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R460	1-216-077-00	METAL CHIP	15K	5%	1/10W
R461	1-216-085-00	METAL CHIP	33K	5%	1/10W
R462	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R463	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R464	1-216-033-00	METAL CHIP	220	5%	1/10W
R465	1-216-081-00	METAL CHIP	22K	5%	1/10W
R466	1-216-073-00	METAL CHIP	10K	5%	1/10W
R467	1-216-073-00	METAL CHIP	10K	5%	1/10W
R468	1-216-097-00	RES,CHIP	100K	5%	1/10W
R469	1-216-097-00	RES,CHIP	100K	5%	1/10W
R500	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R501	1-216-845-11	METAL CHIP	100K	5%	1/16W
R502	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R503	1-216-073-00	METAL CHIP	10K	5%	1/10W
R504	1-216-049-11	RES,CHIP	1K	5%	1/10W
R505	1-216-041-11	METAL CHIP	470	5%	1/10W
R506	1-216-073-00	METAL CHIP	10K	5%	1/10W
R507	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R508	1-216-097-00	RES,CHIP	100K	5%	1/10W
R509	1-216-081-00	METAL CHIP	22K	5%	1/10W
R510	1-216-097-00	RES,CHIP	100K	5%	1/10W
R511	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R512	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R514	1-216-089-00	RES,CHIP	47K	5%	1/10W
R515	1-216-073-00	METAL CHIP	10K	5%	1/10W
R516	1-216-097-00	RES,CHIP	100K	5%	1/10W
R517	1-216-097-00	RES,CHIP	100K	5%	1/10W
R518	1-216-025-00	RES,CHIP	100	5%	1/10W
R519	1-216-025-00	RES,CHIP	100	5%	1/10W
R520	1-216-295-00	SHORT	0		
R521	1-216-025-00	RES,CHIP	100	5%	1/10W
R522	1-216-025-00	RES,CHIP	100	5%	1/10W
R523	1-216-025-00	RES,CHIP	100	5%	1/10W
R524	1-216-025-00	RES,CHIP	100	5%	1/10W
R530	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R531	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R532	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R533	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R550	1-216-089-00	RES,CHIP	47K	5%	1/10W
R551	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R552	1-216-025-00	RES,CHIP	100	5%	1/10W
R600	1-216-295-00	SHORT	0		
R602	1-216-845-11	METAL CHIP	100K	5%	1/16W
R603	1-216-097-00	RES,CHIP	100K	5%	1/10W
R607	1-216-081-00	METAL CHIP	22K	5%	1/10W
R608	1-216-853-11	METAL CHIP	470K	5%	1/16W
R609	1-216-097-00	RES,CHIP	100K	5%	1/10W
R613	1-216-049-11	RES,CHIP	1K	5%	1/10W
R614	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R615	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R616	1-216-049-11	RES,CHIP	1K	5%	1/10W
R617	1-216-097-00	RES,CHIP	100K	5%	1/10W
R618	1-216-097-00	RES,CHIP	100K	5%	1/10W
R619	1-216-097-00	RES,CHIP	100K	5%	1/10W
R620	1-216-097-00	RES,CHIP	100K	5%	1/10W
R621	1-216-097-00	RES,CHIP	100K	5%	1/10W
R622	1-216-097-00	RES,CHIP	100K	5%	1/10W
R623	1-216-097-00	RES,CHIP	100K	5%	1/10W
R624	1-216-097-00	RES,CHIP	100K	5%	1/10W
R625	1-216-017-00	RES,CHIP	47	5%	1/10W
R626	1-216-206-00	RES,CHIP	2.2K	5%	1/8W
R627	1-216-073-00	METAL CHIP	10K	5%	1/10W
R628	1-216-025-00	RES,CHIP	100	5%	1/10W
R629	1-216-025-00	RES,CHIP	100	5%	1/10W
R630	1-216-113-00	METAL CHIP	470K	5%	1/10W
R631	1-216-049-11	RES,CHIP	1K	5%	1/10W
R632	1-216-815-11	METAL CHIP	330	5%	1/16W
R633	1-216-097-00	RES,CHIP	100K	5%	1/10W
R634	1-216-113-00	METAL CHIP	470K	5%	1/10W
R635	1-216-113-00	METAL CHIP	470K	5%	1/10W
R636	1-216-097-00	RES,CHIP	100K	5%	1/10W
R637	1-216-085-00	METAL CHIP	33K	5%	1/10W
R638	1-216-073-00	METAL CHIP	10K	5%	1/10W
R639	1-216-073-00	METAL CHIP	10K	5%	1/10W
R640	1-216-089-00	RES,CHIP	47K	5%	1/10W
R641	1-216-295-00	SHORT	0		
R651	1-216-097-00	RES,CHIP	100K	5%	1/10W
R652	1-216-845-11	METAL CHIP	100K	5%	1/16W
R655	1-216-864-11	METAL CHIP	0	5%	1/16W
R656	1-216-839-11	METAL CHIP	33K	5%	1/16W (TYPE D)
R656	1-216-841-11	METAL CHIP	47K	5%	1/16W (TYPE A)
R656	1-216-845-11	METAL CHIP	100K	5%	1/16W (TYPE B)
R657	1-216-839-11	METAL CHIP	33K	5%	1/16W (TYPE B)
R657	1-216-841-11	METAL CHIP	47K	5%	1/16W (TYPE A)
R657	1-216-845-11	METAL CHIP	100K	5%	1/16W (TYPE D)

Ref. No.	Part No.	Description			Remark
R657	1-216-864-11	METAL CHIP	0	5%	1/16W (TYPE C)
R658	1-216-097-00	RES,CHIP	100K	5%	1/10W
R660	1-216-049-11	RES,CHIP	1K	5%	1/10W
R661	1-216-049-11	RES,CHIP	1K	5%	1/10W
R662	1-216-049-11	RES,CHIP	1K	5%	1/10W
R663	1-216-049-11	RES,CHIP	1K	5%	1/10W
R701	1-216-222-00	RES,CHIP	10K	5%	1/8W
R702	1-216-206-00	RES,CHIP	2.2K	5%	1/8W
R703	1-216-049-11	RES,CHIP	1K	5%	1/10W
R704	1-216-017-00	RES,CHIP	47	5%	1/10W
R705	1-216-073-00	METAL CHIP	10K	5%	1/10W
R706	1-216-089-00	RES,CHIP	47K	5%	1/10W
R707	1-216-073-00	METAL CHIP	10K	5%	1/10W
R708	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R709	1-216-295-00	SHORT	0		
R710	1-216-089-00	RES,CHIP	47K	5%	1/10W
R711	1-216-206-00	RES,CHIP	2.2K	5%	1/8W
R712	1-216-085-00	METAL CHIP	33K	5%	1/10W
R713	1-216-089-00	RES,CHIP	47K	5%	1/10W
R714	1-216-089-00	RES,CHIP	47K	5%	1/10W
R715	1-216-121-00	RES,CHIP	1M	5%	1/10W
R780	1-216-049-11	RES,CHIP	1K	5%	1/10W
R781	1-216-049-11	RES,CHIP	1K	5%	1/10W
		< CONPOSITION CIRCUIT BLOCK >			
RB100	1-233-412-11	RES, CHIP NETWORK 1K (3216)			
RB601	1-233-412-11	RES, CHIP NETWORK 1K (3216)			
RB602	1-233-412-11	RES, CHIP NETWORK 1K (3216)			
		< VARIABLE RESISTOR >			
RV10	1-238-095-11	RES, ADJ, CERMET 470K			
RV230	1-238-090-11	RES, ADJ, CERMET 10K			
RV240	1-238-090-11	RES, ADJ, CERMET 10K			
		< SWITCH >			
S600	1-571-478-11	SWITCH, SLIDE (POWER SELECT)			
SW500	1-762-108-31	SWITCH, PUSH (1 KEY) (NOSE DETECT)			
		< THERMISTOR >			
TH600	1-801-792-21	THERMISTOR, POSITIVE			
TH700	1-810-940-11	THERMISTOR, POSITIVE			
		< TUNER UNIT >			
TUX10	A-3282-045-A	TUX-012 (E) (FM/AM TUNER UNIT)			
		< VIBRATOR >			
X10	1-577-126-51	VIBRATOR, CRYSTAL (7.2MHz)			
X100	1-577-101-11	VIBRATOR, CERAMIC (4.19MHz)			
X150	1-760-556-31	VIBRATOR, CRYSTAL (4.332MHz)			
X600	1-767-833-21	VIBRATOR, CERAMIC (3.68MHz)			
X601	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)			
X650	1-577-101-11	VIBRATOR, CERAMIC (4.19MHz)			

Ref. No.	Part No.	Description			Remark
*	1-669-656-12	SUB BOARD			
		**********			
		< CONNECTOR >			
CN800	1-779-170-11	SOCKET, CONNECTOR 20P			
CN801	1-779-169-11	SOCKET, CONNECTOR 18P			
CN802	1-778-330-21	PIN, CONNECTOR (PC BOARD) 2P			
		< LED >			
LED800	8-719-058-14	LED CL-220PG-C-TS (TAPE WINDOW)			
LED801	8-719-051-01	LED CL-170HR-CD-T (TIR)			
LED802	8-719-038-07	LED CL-190PG-CD-T (⏏)			
		< RESISTOR >			
R800	1-216-049-11	RES,CHIP	1K	5%	1/10W
R801	1-216-025-00	RES,CHIP	100	5%	1/10W
R802	1-216-025-00	RES,CHIP	100	5%	1/10W
R803	1-216-025-00	RES,CHIP	100	5%	1/10W
R804	1-216-025-00	RES,CHIP	100	5%	1/10W
R806	1-216-025-00	RES,CHIP	100	5%	1/10W
R807	1-216-025-00	RES,CHIP	100	5%	1/10W
R808	1-216-025-00	RES,CHIP	100	5%	1/10W
R809	1-216-025-00	RES,CHIP	100	5%	1/10W
		< SWITCH >			
SW800	1-572-921-11	SWITCH, KEY BOARD (RESET)			
SW801	1-771-027-21	SWITCH, KEY BOARD (WITH LED) (⏏)			
		MISCELLANEOUS			
		**********			
22	1-776-527-71	CORD (WITH CONNECTOR) (ISO) (POWER)			
27	1-783-495-11	CORD (WITH CONNECTOR) (EL)			
29	1-777-246-11	CORD (WITH CONNECTOR) (ANT)			
64	1-694-414-11	CONDUCTOR BOARD, CONNECTION			
EL900	1-517-766-11	LIGHT, ELECTRO LUMINESCENT			
F701	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A)			
LCD900	1-803-504-11	DISPLAY PANEL, LIQUID CRYSTAL			
HP901	1-500-157-21	HEAD, MAGNETIC (PLAYBACK)			
M901	A-3291-665-A	MOTOR ASSY, MAIN (CAPSTAN/REEL)			
		**********			
		HARDWARE LIST			
		**********			
#1	7-621-772-30	SCREW +B 2X6			
#2	7-685-792-09	SCREW +PTT 2.6X6 (S)			
#3	7-685-794-09	SCREW +PTT 2.6X10 (S)			
#4	7-685-105-19	SCREW +P 2X8 TYPE2 NON-SLIT			
#6	7-624-104-04	STOP RING 2.0, TYPE -E			
#7	7-627-553-17	PRECISION SCREW +P 2X2 TYPE 3			

Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-473-067-71	WIRED REMOTE COMMANDER (RM-X4S)	
	3-012-070-01	LABEL (SOUND) (2) (for RM-X4S)	
	3-865-829-11	MANUAL, INSTRUCTION (ENGLISH, SPANISH, SWEDISH) (AEP, UK)	
	3-865-829-21	MANUAL, INSTRUCTION (GERMAN, RUSSIAN) (German)	
	3-865-829-31	MANUAL, INSTRUCTION (FRENCH, GERMAN, DUTCH, ITALIAN) (AEP)	
	3-865-829-41	MANUAL, INSTRUCTION (ENGLISH, ITALIAN, POLISH, CZECH, TURKISH, GREEK) (South European)	
	3-865-830-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH, PORTUGUESE, SWEDISH) (AEP, UK)	
	3-865-830-21	MANUAL, INSTRUCTION, INSTALL (ENGLISH, GERMAN, RUSSIAN, ITALIAN) (German)	
	3-865-830-31	MANUAL, INSTRUCTION, INSTALL (POLISH, CZECH, TURKISH, GREEK) (AEP)	
	3-865-830-41	MANUAL, INSTRUCTION, INSTALL (FRENCH, GERMAN, DUTCH, ITALIAN) (South European)	
	X-3373-926-1	CASE ASSY (XR) (for FRONT PANEL)	
**********			
		PARTS FOR INSTALLATION AND CONNECTIONS	
		**********	
501	3-009-613-21	FRAME	
502	7-682-560-04	SCREW +P 4X6	
503	3-022-310-01	COLLAR	
504	3-027-138-01	SPRING, FITTING	
505	3-934-325-01	SCREW, +K (5X8) TAPPING	
506	1-775-543-11	CORD, GROUND	
507	X-3369-817-1	BRACKET ASSY (for RM-X4S) (AEP, UK)	
508	7-685-248-14	SCREW +KTP 3X12 TYPE4	
509	X-3373-432-1	BRACKET ASSY (for RM-X4S) (German, South European)	
510	7-685-248-14	SCREW +KTP 3X12 TYPE4	
511	3-034-262-01	SCREW, FITTING	
* 512	3-358-697-01	BUSHING	
513	1-465-459-11	ADAPTER, ANTENNA	
514	1-776-527-71	CORD (WITH CONNECTOR) (ISO) (POWER)